NOV / DEC 1992

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THE HP Palmtop Paper

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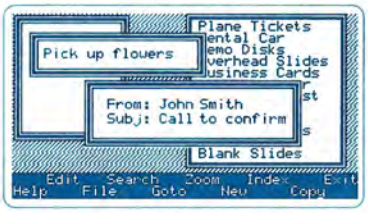

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Publisher's Message

Hal Goldstein

This issue marks the end of our first year publishing The HP Palmtop Paper. In the premier issue we wrote: "Our mission is to share with you possibilities for using the HP 95LX – to provide you with new ways to profit from and enjoy your HP Palmtop. We do this by acting as the central hub where HP Palmtop users worldwide share knowledge and expertise."

Thanks to you – reader, contributor, product developer – we're on target. Each issue this past year has contained another wave of insights on using built-in capabilities, of new product announcements, and of in-depth reviews. Each issue contains more practical ways we can take advantage of the computer we carry in our pockets.

Look at the articles in this issue, check out the expanded advertising, and read about the many new products: The creativity and brilliance that have gone into enhancing the HP Palmtop capability is truly astounding. In this issue you will find that you can attach a modem or wireless receiver directly to your HP 95LX to facilitate communications with the rest of the world (page 12 and 20), carry 20 Meg (40,000 pages) of information with you (page 10), or substitute more robust programs for the built-in applications so you can accomplish more with your HP 95LX (page 25).

For the many of you that are just starting to make use of the HP Palmtop's powerful built-in capabilities – check out the articles and tips in our "How To Use" section.

Subscribers will notice several changes in how we present The HP Palmtop Paper material. We have not tampered much with the quality, quantity, or nature of the editorial content (although hopefully you'll notice some improvements). Instead we have worked on the organization and look of the Paper. Our goal is to make the information easier to access and the articles themselves more inviting to read. We did this by adding more graphics, white space, and changing typography. We're always open to your feedback on format or content.

Our thanks goes to advertisers and product developers who have been willing to invest their resources, venturing in to this untried and as yet small marketplace. These individuals and companies enrich The HP Palmtop Paper on many levels and help make the HP Palmtop more useful to you.

Deeply felt personal thanks goes to regular contributors Ed Keefe, Mark Scardina, and Tom Page, as well as to the scores of other HP 95LX users who have shared their insights. These individuals have taken countless hours of their time to share with us their experiences in making the HP Palmtop more useful. We're all indebted.

Finally we thank the 12,000 plus subscribers in 60 countries throughout the world. You are members of an exclusive club, several years ahead of the rest of the world, who daily experience the value of having this technological wonder in your pocket or purse.

Hal Goldstein

The HP Palmtop Paper

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POSTMASTER: Please send any address changes to *The HP Palmtop Paper*, Attn: Thaddeus Computing, Inc., P.O. Box 869, Fairfield, IA 52556.

Citizen PN48 Not Expensive to Operate; When it's Time to Change Paralink Battery.

I enjoyed the printer article in the Sep/Oct issue. I wrote the review of the Citizen PN48 and want to give some additional feedback on operating costs.

We listed the operating costs at 36¢ per page, which is correct when single-strike ribbon and paying full retail price for a five-pack of ribbons. However, you can get a five-pack of single- or multi-strike ribbons from *CompuAdd* in Austin, Texas, for $19.95 (800-825-3000, Fax: 512-219-2890). This brings the individual ribbon cost down from $5 to $4 per ribbon, and the per-page cost down to 29 cents.

The Citizen is even more economical to operate if you use the multi-strike ribbon. I found that if you use good laser-quality paper, you can use the multi-strike ribbons 4 or 5 times. This brings the per-page cost down to 6-7 cents per page. The PN48's user's manual recommends Wheyerhauser First Choice or Hammermill Laser Print 24 lb paper. You should be able to get a 500-sheet ream of paper for around $8 at a discount store.

Also, you didn't mention that the PN48 won *PC Magazine's* "Editor's Choice" award.

We also mentioned the Paralink 3 is a serial-to-parallel adapter in the printer review. The adapter uses a small, replaceable battery for power. When the battery is getting low, your printer may start acting funny, skipping lines, printing out weird characters or partial pages. When you start noticing this, it's time to change Paralink 3's battery.

Bob Newins
Richmond, VA

Problem Using Diet and Lotus; "Little Green Men Make Noise in the 95LX

You can save a lot of space by using DIET to compress Lotus worksheets *(DIET – see page 17, Fall 91 issue.)* However, if you have DIETed worksheets that are linked to other worksheets, you may run into problems. If one worksheet tries to link to another that is DIETed, you'll get an error message. All related worksheets must be decompressed to link. This reduces the usefulness of DIET in TSR mode.

Although the 95LX is a noiseless computer, a very low sound can be heard from the 95LX. If you want to test it, be sure the environment is very quiet and 95LX is in "OFF" position. Keeping your finger on the "ON" key, bring the 95 LX very near to your ear and turn the 95 LX "ON". You will hear a whisper from the 95LX, like a small and light disk turning in the Palmtop. The whisper increases, if you run an application.

Ahmet G. Ozisik
Istanbul Turkey

[The current theory promoted by David Goodman on CompuServe is that "Little Green Men" inhabit the HP 95LX. Dave wrote LGM.ZIP to detect them – Hal.]

My Favorite Tips!

I have an HP 95LX Palmtop Computer and I love it! I recently got a subscription to your *HP Palmtop Paper* and have enjoyed much of it. I like best the tips you give to creatively use the built-in 95LX software. The most helpful items for me so far have been:

1. Ed Keefe's article (page 25, Fall 91 issue) that told about how to use Lotus to extract the first ten letters from a memo file.

2. Tom Page's mention (page 29, Fall 91 issue) that you needed to press CTRL to activate Copy and Paste in 1-2-3 (and HP CALC).

3. Ed Greenberg's Quick Tip (page 23, Jan/Feb 92 issue) on how to use the PHONE as a free-form database.

4. The tip (page 23, Jan/Feb 92 issue) on how to switch between PHONE lists using macros.

5. Alfred Herz's letter hint (page 2, Mar/Apr 92 issue) that you can use GOTO instead of FIND to locate records in Phone.

On The Palmtop Paper on Disk; DIET on the 92 Subscribers Disk. LGM.ZIP on the Nov/Dec 92 ON DISK issue.

STOP! Before you buy another set of batteries...

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6. Answer to Ahmet G. Ozisik's letter (page 3 of the July/August issue) describing how to do a hard reboot without losing files.

7. The tip about creating a macro to delete one MEMO line (page 46, July/August issue).

I would like to see even more tips on how to use the built-in programs, how to print labels using PHONE, etc.. I particularly like User Profiles because they also give me ideas on how to make the most of what I've got. The Basic Tips section is a little too simple and seems a rehash of the User's Guide.

Again, thanks so much for putting out the HP Palmtop Paper. It has been helpful.

Edward R. Blankenship
The Navigators
Little Rock, AR, USA

Portuguese 95LX Bulletin Board

I am currently running a HP 95LX BBS here in Portugal, where I exchange information about the 95LX. The PC-Board number is 351-1-3526-422/3/4/5/6 and the bbs name is CATS-BBS. Give us a call!

Pedro Metello
Portugal
CompSrv: [100021,1151]

He Carefully Saves The HP Palmtop Paper

The 95LX has been my new right hand since May of '91, with its brand-/grand-new "95Buddy". Thanks to a previous Quick Tip, I just finished undeleting a file via XTGOLD, and was caused to reflect upon how much your publication has increased my utilization and enjoyment of this incredible tool. I've benefited since issue No. 1 (which really should be packaged with each machine as supplemental documentation).

I am a computer user since April, 1980 (TRS Mod I) in a home/office environment, and still read four magazines a month. Yours is, however, the very first publication in these 12 years that I have carefully saved every issue for my future reference.

Thank you for all the hard work — it shows!

Lawrence R. Gilberti
General Adjuster
CompuServe ID: [70475,104]

Likes Subscription, Considers Contributing

Wow!!! I was inundated with HP Palmtop Papers this week. I recently ordered a subscription and the back issues showed up all at once. My productivity dropped to a new low while I soaked up all the information in them. Great publication. I had been lurking around CompuServe for about a month, reading 95LX messages, downloading files, etc., and didn't think there was much more I could learn from *The HP Palmtop Paper*, but I was wrong. Thanks for the great work, from not only Hal, but Ted, Rich, Mark, Todd, Larry, Ed, Tom, and everyone else who has contributed so far. Maybe I'll even screw up enough courage to contribute.

John McCaskill
CompuServe ID: [72261,1360]

[Thanks much, John. As you so aptly pointed out, The HP Palmtop Paper is a collective effort. My job is to encourage contributors and forge it into a coherent whole. Your contributions would be very welcome.

Anyone who wants to contribute can send me articles via E-MAIL, call or write (see inside back cover for details). However, sometimes even excellent articles don't make it right away due to space and balance considerations. A more conservative approach would be to send me an outline of your ideas. I can comment back and give you an idea when we can use the article and the direction to take.

In general, articles should speak to as broad a 95LX audience as possible (or at least a significant section of our readers). Since we have brand new computer users and professionals among our readership, this can be a challenge. What is useful and practical for busy 95LX users is what I look for most — Hal.]

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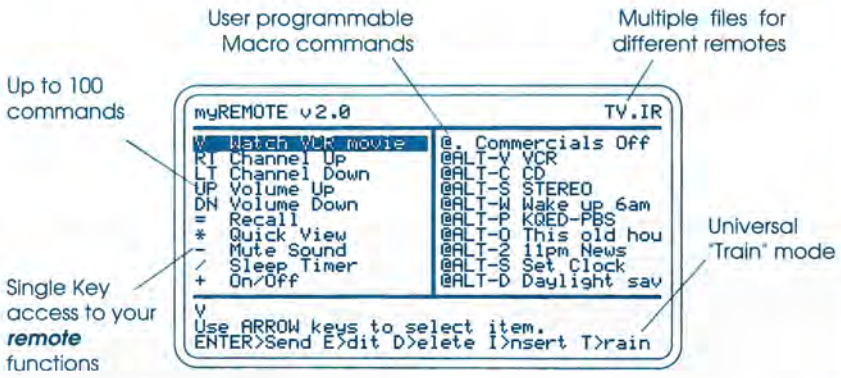

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That's right — virtually every freeware and shareware program mentioned in each printed issue is included in the corresponding *HP Palmtop Paper ON DISK*, along with documentation.

These programs are useful! Many of them have been written or specially adapted just for the HP 95LX.

To give you an idea just how useful these programs can be, we've summarized the contents of recent issues — see box at right.

Please note:

1. If you decide to use a shareware program, you are required to pay the shareware author his fee. Fees usually range from $5 to $45 — a fraction of the cost of equivalent commercial programs.
2. We are unable to support you in using *The HP Palmtop Paper ON DISK* software.

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Dozens of man-hours go into collecting, organizing, modifying, and documenting the programs in each *HP Palmtop Paper ON DISK*. Having the disks saves you the time and expense of doing all this work yourself.

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To give you an idea of the tremendous value this represents, here are just a few of the highlights of the software included in recent issues of The HP Palmtop Paper ON DISK:

Instructions and utilities for accessing all programs are included on each disk.

WORD PROCESSING

VDE: Compact, powerful text editor – great MEMO alternative.

SPEL95: Spell Checker for the HP 95LX.

VDE-LX: Makes VDE work like WordPerfect.

COMMUNICATIONS

COMMO: Full-featured communications program — richer scripting language than the 95LX's built-in program — easier to automate your activities.

UTILITIES

95BUDDY: Lets you launch an application by selecting its data file in FILER, change default directories, and more.

OUTLINE PLUS: Outliner and text editor.

LOADMAKER: Run EXE, COM, or BAT files while in a built-in application.

FINISH: Completes word after you type first few letters.

ATO: Automates CompuServe activities. Allows you to perform functions off-line, saving you line charges.

GAMES / ENTERTAINMENT

AG: Chess and Space Invaders (good graphics).

KLONDIKE: 7 pile game of Klondike Solitaire

DIVDSK: Checkers, Go-Moku, Tetris, Othello, Mastermind, Adventure, and 9 other games. Enjoy!

MUS95 & SNDPLAY: Music, quotes, sounds on the 95LX.

Plus travel organizer, language compilers, screen printing utilities, other games, and lots more! (See Issue #0, p.36, Issue #1 p.43, Issue #2 p.44, Issue #3, p.48, Issue #4, p.48, and Issue #5, p.52, this issue, inside back cover, for complete listings.)

HOW DOES IT COMPARE WITH THE SUBSCRIBER DISK?

The HP Palmtop Paper ON DISK is not to be confused with the Subscriber Disk that you receive free in June with each year's subscription to The HP Palmtop Paper.

The annual Subscriber Disk is one or two 360K floppies containing some of the best freeware for the HP 95LX (no shareware).

NEWS

RAM Card Winners; News of Interest From HP to 95LX Users

There were many winners in HP's free RAM card contest! Upgrade program to end. HP will remain strong with change of leadership. New DeskJet Portable Printer a promising candidate for the 95LX. Service agreement extends warranty coverage. News around the world is exciting.

By Robert Roney

Winners of the HP User Profile Contest!

Hewlett-Packard and *The HP Palmtop Paper* would like to thank everyone who took time out of busy schedules to write up and send in descriptions of how you use the 95LX. It was more than a little difficult to select the three "best" stories. Each person had some unique and creative application for this amazing little machine.

Reading all the different experiences was literally taking a trip around the world, from horseback riding in Spain to a bumpy ride on a Turkish commuter train; from computerized ham radio communications in Peru to trading options at a Tokyo restaurant during dinner; from large scale farming in California to oil drilling in the Arabian desert. We heard from a doctor in India doing radiation research, an epidemiologist in Puerto Rico and an ophthalmologist in Mexico. Other entries included an international salesperson; real estate agents; students in business, chemistry, programming and electrical engineering; a medical researcher keeping morbidity statistics; a business professional keeping client and vendor lists, family birthdays, stock prices, amortization schedules, interest rates, and train schedules.

Every entry was good, and we had to choose three! We looked for entries that thoroughly used the 95LX in interesting, unique ways. We picked three who win the 1 megabyte RAM card: Blair Saunders, cyclist/MIS (published on page 29 of this issue); John Chimits, farmer; Jorge Heraud, research scientist. But in truth, we had so many top quality entries that we decided to give full 1992 Subscriptions to *The HP Palmtop Paper ON DISK* to the next six runners up: Murray Besler, educator; S. Mehta, medical scientist; Niles Hanson, in precision manufacturing; Douglas Gilbert, student; Jose Becerra, epidemiologist; Mark Snyder, engineer, pharmaceuticals. In addition, the first 50 entries have already received 128K RAM cards from HP.

We have just mentioned a few of the profiles sent to us. All of the entries were "winners" in our minds, and we intend on publishing many more of them as full features, and including many of the details, tips and miscellaneous information from many of these stories in future issues of *The HP Palmtop Paper*.

HP 95LX Upgrade Program Ends Dec 31, 1992

The 512K to 1MB HP 95LX upgrade program first announced in the March/April issue will cease at the end of 1992. You can still upgrade your 512K 95LX for $190. For more information, see the front cover of the March/April 1992 issue of *The HP Palmtop Paper*.

HP CEO Retires; Other Changes in Management

John Young, President and CEO of Hewlett-Packard Company for 14 years retired October 31 of this year and was replaced by Lewis Platt, former executive vice president and

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Brooklyn, New York 11230

head of Hewlett Packard's Computer Systems Organization.

Since Young took over as CEO in 1978, HP's annual revenues have grown from less than $1 billion to a high last spring of more than $14 billion, 70% of which comes from computer-related products. Industry analysts believe the management change will have little negative impact on HP's direction, strength, and continuing rapid growth.

John's successor, Lewis Platt, has been with HP for 26 years. He has held the general manager position in HP's Analytical Products Group; Manufacturing Systems Group; and the Manufacturing, Medical, and Analytical Systems Sector. He headed HP's former Technical Systems Sector and Computer Products Sector, and became the general manager of the Computer Systems Organization in 1990. Mr. Platt was also elected to the HP Board of Directors, effective November 1.

HP Markets HP Deskjet Portable Printer in U.S.

Hewlett-Packard Company has introduced a portable version of its popular HP DeskJet 500 printer. The 4.4 lb HP DeskJet Portable offers the same laser-quality (300 dpi) output as the DeskJet 500. The DeskJet Portable connects to any PC-compatible computer via a parallel printer port, and ships with a custom-designed, low-profile parallel cable that is flexible and easy to pack. An optional rechargeable battery is available, allowing 100 pages of printing per 6 hour recharge (a standard video camcorder battery can also be used).

The printer has a fast 160 character per second (cps) output in letter-quality mode and comes with CG Times and Universe fonts in portrait and Courier and Letter Gothic in portrait and landscape.

The DeskJet Portable printer accepts letter-, legal-, and A4-size cutsheet paper, transparency film and

The HP DeskJet Portable Printer

labels manually fed. The optional cutsheet feeder holds up to 50 sheets of paper or transparencies. The DJ Portable uses the 500's ink cartridge (not the high-capacity).

The HP DeskJet Portable is a parallel printer and would require a serial-to-parallel adapter to connect to the 95LX's serial port.

Mobile Data Link
C:\MDL\INCOMING.MSG
12/16 5:53 pm
MailBox Index
00 12/15 11:00 am How about lunch today
01 12/15 2:43 pm Thanks for the order
04 12/15 10:16 am Received your request
00 12/16 1:33 pm I'll review the finan
00 12/16 2:02 pm Tee-time at 5:45. So
*04 12/16 4:54 pm [PHONE update success
*03 12/16 4:59 pm [APPT update success
*04 12/16 5:04 pm [123 update successfu
Copy Undel Read
Help Delete Tag
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With SkyTel's SkyStream™ service, the HP 95LX palmtop PC can receive important information in seconds. Like a Lotus 1-2-3 spreadsheet update from the home office. A message about last-minute changes to an important presentation. Or good news about winning a big order. So no matter how fast you're moving, your business can keep up. To learn more about the HP 95LX and SkyStream Nationwide Messaging, call 1-800-456-3333, ext. 0224.

SkyTel A subsidiary of Mtel

Order Information

HP DeskJet Portable Printer — $599
A 4.4 lb laser-quality parallel port portable printer for Hewlett-Packard. Optional cut-sheet feeder lists for $99. A rechargeable battery is available for $49. Optional Carrying Case for printer and notebook computer lists for $99. Worldwide rapid recharger that holds two batteries at a time and takes only 1.5 hours to recharge each battery is available for $99. Rapid recharger adjusts to different voltage standards.

USA CONTACT: *Local HP retailers or call 800-752-0900.*

INTERNATIONAL CONTACT: *Local HP retailers.*

HP and RAM Mobile Data Join Forces to Market Two-Way Wireless Data Communications

Hewlett-Packard Company and RAM Mobile Data recently announced that they will jointly market the HP 95LX and RAM's wireless data-communication networks. The joint marketing of these technologies will provide a mobile-data package capable of supporting mobile computer users with wireless E-mail and remote access to on-line databases and spreadsheets. Potential users include mobile professionals such as corporate E-mail users, insurance and real-estate sales people, and field service technician. (See page 20 this issue for more on wireless technology.)

HP Service Agreement

You can extend the warranty protection of your 95LX by purchasing an HP Service Agreement. The 1-year ($50) or 3-year ($135) plans extend the protection on your HP 95LX within the USA. International users: Contact your local HP sales center.

The service agreement covers repair or replacement of your 95LX at no additional cost. An HP representative said that out-of-warranty repair costs for the 95LX tend to be high and that the Service Agreement was a good way to limit your risk.

HP promises (1-3 days repair time) and will return your repaired 95LX via Priority Mail.

You may purchase an HP Service Agreement within one year of the original warranty or a 90-day repair warranty. The Service Agreement will start at the expiration of the 1-year or the 90-day repair warranty.

To order the Service Agreement, fill out and send in the service agreement order form that came with your 95LX. For more information contact: *Hewlett-Packard, Corvallis Service Center, 1030 NE Circle Blvd., Corvallis, OR 97330-9903, USA; Phone: 503-757-2002 (ask for Service Agreement Contract Administrator.*

Future 95LX's to Link with Interactive Television

Hewlett-Packard has been licensed to manufacture and market TV Answer's home interactive television receiver. TV Answer will begin interactive service in New York City, possibly by the end of 1992. HP plans a hardware rollout to coincide with the service start dates, and will market the device through consumer electronics retailers for less than $700.

TV Answer chose HP because of its reputation for creating durable, service-free products. HP plans a family of interrelated TV Answer products which could include a printer, CD-ROM drive, and "a whole set of personal digital assistants and mobile devices." Future 95LX Palmtops may also be designed to work with these devices.

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- Performs arithmetic to thousands of digits.
- Simplifies, factors and expands expressions.
- Does exponential, logarithmic, trigonometric, hyperbolic and probability functions.
- Taylor and Fourier series approximations.
- Permits recursive and iterative programming.
- Can generate Fortran, Pascal and Basic statements.

System requirements

PC version: MS-DOS 2.1 or later, only 512Kb RAM and one 3.5" or 5.25" disk drive. Suggested retail price $250.

ROM-card version: Hewlett-Packard 95LX Palmtop computer. Suggested retail price is $289.

Contact Soft Warehouse for a list of dealers. Or, ask at your local computer store, software store or HP calculator dealer. Dealer inquires are welcome.

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HP News Around the World

[Thanks to Roberto Sanchez, Hano Martin, and Emmet Jones of Hewlett-Packard Company for this information.]

INTERNATIONAL: Different Language Versions of the Connectivity Pack

The HP Palmtop Paper mistakenly reported that international versions of the HP Connectivity Pack were not available. It is available in the following languages:

F1001A-900	ABA	= US English
F1001A-900	ABB	= Europe English
F1001A-900	ABD	= German
F1001A-900	ABE	= Spanish
F1001A-900	ABF	= French
F1001A-900	ABZ	= Italian

There is NO Portuguese (AC4).

CONTACT: *HP dealers throughout the world.*

CAUTION: The connectivity pack for Spanish (ABE) expects to be run on the Spanish 95LX. Running a Spanish connectivity pack on an English 95LX may give unusual results.

INTERNATIONAL: AC Adapters for Around the World

These adapters provide power for your HP 95LX (or HP82240B Infra-Red Printer).

Australia – 240v 50Hz (HP 82241AG)	$14.95
Europe – 220v 50Hz (HP 82241AB)	$14.95
Japan – 100v 50/60Hz (HP 82241AJ)	$14.95
U.K. – 240v 50Hz (HP 82241AU)	$14.95
USA/Canada – 120v 50/60Hz (HP 82241A)	$14.95

CONTACT: *HP dealers throughout the world.*

BRAZIL: Portuguese 95LX

Hewlett-Packard introduced a Portuguese version of the 1MB HP 95LX at the Latin American Comdex show held in mid-September in Sao Paulo, Brazil. The unit lists for $890 (US).

CANADA: Discount on Purchase of Cellular Phone with Purchase of the HP 95LX Palmtop

Novatel and Hewlett-Packard are running a joint promotion in Canada. Current purchasers of the HP 95LX will receive a $344 (Cd) discount on an Avante Cellular phone. The promotion is to be announced in the second half of October in the Canadian printed media. It will continue running for approximately six months. Pick up a coupon from your HP dealer when you buy your 95LX. Mail it in with proof of 95LX purchase to receive a discounted cellular phone.

CANADA: French Canadian HP 95LX 1MB Units Available in Quebec

Hewlett-Packard has a version of the 1MB 95LX available that consists of a French localized unit with a QWERTY keyboard *(ask for the "**ABC**" option for ordering purposes).* French units sold elsewhere come with the AZERTY keyboard that is used in France and the other French-speaking countries around the world (ABF option).

EUROPE: HP 95LX Marketing and Support Moves to Grenoble, France

As of November 1, 1992, HP's European product marketing, technical support, and developers program for the 95LX will be based in Grenoble, France, together with HP's European PC and Networking marketing centers. Contact Information: *Personal Information Products Group, Hewlett-Packard France, 5, Avenue Raymond Chanas, F-38053, Grenoble, Cedex 9, FRANCE; Phone: +33 76 62 57 98; Fax: +33 76 62 10 56.*

HONG KONG: StarPaging, New Pager/Receiver for the HP 95LX

The StarPaging company of Hong Kong has developed DataLink, a low-cost pager that receives a 24 hr-per-day stream of stock exchange and betting information in Hong Kong. The product has been selling since August. *(For more information contact: Hewlett-Packard Hong Kong Ltd, 22nd Floor, EIE Tower, Bond Center, 89 Queens Way, Central Hong Kong.)*

KOREA: Samsung Life Insurance Purchases 12,100 HP 95LX's for Sales Force

Samsung, one of the largest life insurance companies in Korea, has begun equipping its sales force of life insurance agents with the HP Palmtop. They are implementing a system to provide insurance agents with current, critical policy data anywhere they go, so that they can work up policies during one visit, instead of the current average of three visits.

Samsung agents will be able to present a menu of available policies to the client, input his or her personal information, and prepare an individual life insurance policy within minutes. The policy can then be sent electronically to the main office where the information is stored on the corporate database for future use, including claims processing, updates and billing.

Samsung hopes to use the 95LX to give their agents an edge in one of the fastest growing industries in Korea.

MEXICO: Printing to an HP Infrared Printer

A Mexican software house has produced a program that will allow the HP 95LX to print to a small HP Infrared Printer (printer's part # HP 82240B). It was produced as part of a custom contract with a large international cosmetics company and has not been released to the general public yet. We'll keep you informed as we get further information.

TAIWAN: World's Smallest Chinese Computer is the 95LX

The ETEN Information Systems of Taiwan produces a Chinese version of the HP 95LX. *(See page 45 of the May/June 92 issue for product description and contact information.)*

This model was launched in Taipei and is reportedly selling briskly in Taiwan and other countries with large Chinese populations.

SUNDISK Lets You Store 10-20 Megabytes on a Memory Card — No Batteries Needed!

By Hal Goldstein

A new world of file storage possibilities has opened up for HP 95LX users. SUNDISK recently announced a series of high-capacity "Mass Storage Cards" compatible with the 95LX Palmtop. These specially engineered Flash ROM cards come in capacities up to 10 Megabytes. With available compression software, 95LX users with a SUNDISK SDPL5 Mass Storage card in the memory card slot, will be able to store as much as 20 Megabytes (about 40,000 pages) of data on the card.

Users will now be able to store large databases of information, DOS programs that require lots of disk space, and larger or more spreadsheets and word processing files. Having specific technical information readily available anywhere will surely be a boon to professionals such as physicians, lawyers, sales professions, teachers, and engineers.

To give a flavor of what is to come, Official Airline Guides (OAG) and Navigation Technologies announced their intention to provide their information on SUNDISK cards. OAG is a compiled and updated schedule of over 700 airlines worldwide. Navigation Technologies' navigable database is a collection of information on all major metropolitan areas and inter-city road networks.

When coupling this mass storage breakthrough with other emerging technologies, we can begin to envision computing for the rest of this century. In the future we will examine the synergistic effect of combining such innovations as higher storage capacity with wireless communications (see page 20, this issue), and expanded multi-tasking (see page 25, this issue).

SUNDISK Mass Storage Technology Compared to RAM Cards

Currently, for extra storage HP 95LX owners use SRAM cards such as the many advertised in this issue. SRAM cards and Flash cards are "solid state" storage media. User data is transferred to solid state media electronically. In contrast, data gets transferred to a hard disk of a desktop computer mechanically. In general, solid state devices are faster, more reliable, and more portable than mechanical devices.

An important difference between

SUNDISK Mass Storage Card

a SUNDISK Mass Storage card and an SRAM card is that the SUNDISK card does not require a battery to maintain its contents. Once you copy a file to a SUNDISK card, the file is literally etched into the card until it is overwritten — a battery is not required to maintain the file's contents. On a SRAM card, when the battery

UTIL Forth Version 2.4

The 95LX Toolkit For Programmers And Non-Programmers

Harness all the power of your 95LX with UTIL - a System Manager compliant implementation of the Forth language. Even if you are not a programmer, you'll make use of the sample programs that include games, music and useful utilities.

Create System Manager compliant loaders for your favorite DOS programs, or shell to DOS with a hot-key using the UTIL EXM loader. The easy-to-use patching tools let you set the Alt-Arrow and Cursor-Tracking functions for the loaded program. The package includes a comprehensive User's Guide and many source code examples.

UTIL includes a Forth compiler, 8086 assembler, decompiler and disassembler, to turn your 95LX into a portable software development system. Create compact, System Manager compliant executable applications and standalone .COM programs. Or use the tools to access the built-in graphics capability of your 95LX, explore memory and much more.

Here's what a few of the current users (who can upgrade to Version 2.4 for only $10) say about UTIL:

"The loader capability is a real bonus on the 95LX" • "Good job!"
"Worth it for the examples alone" • "Thank you for a fine program"
"I love this package" • "Great software package! Thanks"

UTIL is a perfect match for your 95LX, and at a list price of just $70, it's a real bargain ($80 outside U.S.A. and Canada). To order your copy, call today.

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starts to go bad there is little time to change the battery or back up files.

It is a little slower to write to, or read from Flash cards than SRAM, but faster than most hard disks. Currently, the price of SUNDISK Mass storage per megabyte is a little lower than SRAM. The number of write-cycles to a SUNDISK card is limited (100,000 according to company specifications). SUNDISK said that it is theoretically possible to write an intensive read-write application that could "wear out" the SUNDISK card. However, according to SUNDISK this shouldn't be a problem for a typical user because of "wear-leveling" techniques incorporated into the card.

One other important difference between SUNDISK and SRAM cards: Once formatted, the files on a SRAM card can be read by an HP 95LX by just inserting the card. The SUNDISK card requires that a file called a "device driver" be on the 95LX's built-in C drive. In addition, the CONFIG.SYS file on the C drive must be modified (or created if one does not exist).

The SUNDISK Mass Storage card comes with a connectivity cable and installation software to transfer the necessary files to the 95LX. IMPORTANT NOTE: If the C drive or the SUNDISK device driver file ever becomes corrupt, you will not be able to access the SUNDISK card until you have replaced the device driver and restored the CONFIG.SYS file.

Some SUNDISK Specifics

The SDPL5 series of Mass Storage cards from SUNDISK represents an impressive engineering effort. SUNDISK made use of the flash technology originally developed in 1984 to create an important tool for the HP 95LX and other mobile devices. Here are some of the innovations in the SUNDISK product:

1. Software (device driver) that allows the HP 95LX to read 10 megabytes of flash memory as the "A" drive. (Two megabytes is the specified HP 95LX PC-card limit.)
2. Electronics within the card that use the power of the HP 95LX to write data to the card (draws less battery power from your HP than a SRAM card).
3. The SUNDISK card is the industry's only complete mass storage system on a card. The card includes memory, memory control, and I/O interface functions on the card itself. It uses 512 byte sectors and implements an IDE controller, which results in compatibility with existing operating systems, application programs, and utilities.
4. The SUNDISK card is PCMCIA-ATA compliant. That means that the same card or future versions of the card will be usable in the variety of palmtops and other devices without having to change software. For example, the SUNDISK cards can be used in the latest Databook or Adtron PC card readers and can be used in a Sharp PC-3000 palmtop.

Conclusion

The product is new — we have not seen the final product. In future issues, we will give a more in-depth review of the product and provide a forum for readers to share their experiences.

SUNDISK is a well-funded, impressively-staffed start-up company that wants to be a leader in what surely will be a huge market. Assuming the SDPL5 mass storage card delivers on its promises, SUNDISK has made a strong step in fulfilling its charter to "develop and deliver superior, solid-state mass storage solutions that are interoperable among portable computing devices."

Order Information

SUNDISK SDPL5
Mass Storage Cards

These specially engineered "Solid-State Drives" (Flash ROM memory cards) provide up to 20 megabytes of mass storage for the HP 95LX.

SUNDISK Solid-State Drives

1MB	Card (SDPL5-1)	$199
2.5MB	Card (SDPL5-2.5)	$399
5MB	Card (SDPL5-5)	$599
10MB	Card (SDPL5-10)	$999

All Solid-State drives available with optional compression software (102-B1) for an additional $40 charge.

CONTACT: *SUNDISK Corporation, 3270 Jay Street, Santa Clara, CA 95054 USA; 800-688-7177 or 408-562-0500; Fax: 408 980-8607.*

If you see . . .

File I/O error or RAM Disk Corrupt

and you can't remember when you last backed-up your file, then you need

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the product that allows for recovery of your phonebook files.

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Check or Money Order
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Back Issues of The HP Palmtop Paper

While supplies last, you may purchase sets of back issues of *The HP Palmtop Paper* or *The HP Palmtop Paper ON DISK*. Use the enclosed order card or contact *Thaddeus Computing Inc,*

Phone: ***800-373-6114*** *or* ***515-472-6330***
Fax: ***515-472-1879***.

New Non-HP Products Designed to Work with the HP 95LX

In the first six issues we listed over 240 hardware and software products, and other 95LX-related services already available from third-party manufacturers and developers. We will continue to list 95LX hardware, software, books, videos, training, and services as we discover them. Vendors of 95LX-related products should send us information.

By Richard Hall and Hal Goldstein

Hardware

Connectivity

SmartDock™ DataExchange

Slip the 95LX into this docking station and connect the 95LX to the DOS/Windows operating systems on your PC and to an AC adapter to save battery life. Pop-up windows help you transfer files. SmartDock DataExchange includes the SmartDock Station (formerly Station95, see page 12, Sept/Oct 92 issue) and the SmartDock DataExchange software.

A Macintosh version is also available.

[See Advertising, pages 33-36.]

Availability ..... Jan 1, 93
Software medium ..... Floppy disk
Runs under System Manger ... Yes
Pricing $119.95
CONTACT: *Sparcom Corporation, 897 NW Grant Ave., Corvallis, OR 97330, USA; Phone: 800-827-8416 or 503-757-8416; Fax: 503-753-7821; CompuServe ID: [75320,2440].*

SmartDock™ Fax/Modem

Slip your 95LX into this docking station and fax an ASCII file from your 95LX, or send and receive files through its built-in modem to your office or favorite bulletin board service. The package includes Sparcom's SmartDock DataExchange (above), a 2400 baud Fax/Modem, Sparcom's new DataExchange connectivity software, a built-in serial-to-parallel port printer adapter, a serial port for connectivity, and an AC power adapter to extend battery life.

[See Advertising, pages 33-36.]

Availability ..... Jan 1 93
Software medium ..... Floppy Disk
Runs under SysMgr ..... Yes
Pricing $399.95
CONTACT: *Sparcom Corporation, 897 NW Grant Ave., Corvallis, OR 97330, USA; Phone: 800-827-8416 or 503-757-8416; Fax: 503-753-7821; CompuServe ID: [75320,2440].*

SmartDock™ InPrint

This docking station has a built-in serial-to-parallel adapter that allows your 95LX to easily connect and print to almost any printer. Also includes the features of the Smart Dock Station (formerly Station95) and Data Exchange software (DOS/Windows versions available).

[See Advertising, pages 33-36.]

Availability ..... Jan 1 1993
Pricing $169.95
Runs under SysMgr ..... Yes
CONTACT: *Sparcom Corporation, 897 NW Grant Ave., Corvallis, OR 97330, USA; Phone 800-827-8416 or 503-757-8416; Fax: 503-753-7821; CompuServe ID: [75320,2440].*

The HP-IL Adapter

This adapter adds an HP-IL interface to your 95LX, without giving up your RAM card slot or your serial port. The HP-IL interface occupies the memory card slot, adding the HP-IL interface and another RAM card slot (i.e. you don't loose your card slot). It allows you to use HP-IL printers, disk drives, plotters, modems, and video displays.

[See Advertising, page 43.]

Availability ..... Dec 15, 92
Pricing $275
CONTACT: *Interloop, Inc., 706 Charcot Avenue, San Jose, CA 95131, USA; Phone: 408-922-0520; Fax: 408-922-0545.*

Fax / Modem

9624 VAP Pocket Fax/Modem

Compact, fully Hayes compatible 9600 bps send/receive fax & 2400 bps data modem. Connects to standard 9-pin RS-232C connector and runs on external adaptor or internal 9-volt battery. Comes with BITFAX/BITCOM software, user manual, 9-volt battery, AC adapter and phone cord.

[See Advertising, page 27.]

Availability ..... NOW
Pricing $199
CONTACT: *Neutek International Corp., 824 South Mill Avenue, Suite 301, Tempe, AZ 85281, USA; Phone: 602-731-7211; Fax: 602-731-7212.*

WorldPort V.42bis Modem Fits into HP Palmtop Cradle

This product is a 2400 baud modem that slides directly into the HP Cradle. The modem runs off of either its own 9-volt battery, or the 95LX's AC adapter. The modem includes CCITT V.22bis-/2400 bps compatibility, plus V.22/V.21 and Bell 212A/103 compatibility. It also includes V.42/V.42bis error control and data compression. The WorldPort 2400 V.42bis can also be used with an acoustic coupler where direct connection to the phone line is not possible.

Availability ..... Now
Pricing $249
CONTACT: *U.S. Robotics, 8100 N. McCormick Blvd, Skokie, IL 60076-2999, USA; Phone: 800-342-5877 or 708-982-5010; Fax: 708-982-5235.*

Telecoupler II Acoustic Coupler

This coupler lets you connect all but "line powered" modems to the handset of any telephone. RJ-11 jacks are not required. Transmits up to 2400 baud for modems or 9600 baud for fax.

Availability ..... Now
Pricing $139.95
CONTACT: *EduCALC, 27953 Cabot Road, Laguna Niguel, CA 92677, USA; Phone: 800-677-7001 or 714-582-2637; Fax: 714-582-1445.*

Memory Cards and Card Drives

Neutek Memory Cards

RAM cards for data storage, ranging from 64K to 2MB. Flash/OTP cards for program storage ranging from 256K to 4MB. New EEPROM cards operating the same as RAM cards, without the need of battery backup, range from 8K to 265K. Cards come with 12 month warranty.

[See Advertising, page 27.]

Availability ..... NOW
Pricing ..... Call
CONTACT: *Neutek International Corp., 824 South Mill Avenue, Suite 301, Tempe, AZ 85281, USA; Phone: 602-731-7211; Fax: 602-731-7212.*

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- Performs even in the most extreme temperatures -40°F to 160°F.
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YOUR EVEREADY REPRESENTATIVE WILL CONTACT YOU WITH DETAILS.

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the Powerful Difference

DublHdr™ Dual Memory Card Adapter

This small adapter slips into the 95LX's memory card slot and gives your 95LX two PCMCIA memory card slots. One slot will be seen as drive A: & B: while the other slot will be E: & F:.

[See Advertising, page 43.]

Availability ..... Dec 15, 1992
Pricing $129.95
CONTACT: *Interloop, Inc., 706 Charcot Avenue, San Jose, CA 95131, USA; Phone: 408-922-0520; Fax: 408-922-0545.*

Memory Card Drives

Card drives in serial, parallel, and ISA bus interface to desktop PCs. Come with user manual, software, cable and adaptor.

[See Advertising, page 43.]

Availability ..... NOW
Pricing
- External Serial interface .. $299
- External Parallel interface $279
- Internal ISA bus interface . $168

CONTACT: *Neutek International Corp., 824 South Mill Avenue, Suite 301, Tempe, AZ 85281, USA; Phone: 602-731-7211; Fax: 602-731-7212.*

PCMCIA Designer's Kit

Components for memory card drive designers. Single-chip card controller IC and 68-pin card connectors to build interface to palmtops or PCs.

[See Advertising, page 43.]

Availability ..... NOW
Pricing
- Controller $35
- Connector $6

CONTACT: *Neutek International Corp., 824 South Mill Avenue, Suite 301, Tempe, AZ 85281, USA; Phone: 602-731-7211; Fax: 602-731-7212.*

SUNDISK SDPL5™ Cards

These high-capacity Mass Storage Cards (specially engineered Flash ROM) fit in the memory card slot of your 95LX and give you from 1MB to 10MB of extra file storage (up to 20MB if a file compression utility is used). Solid-state SUNDISK SDP Cards require no battery, so you cannot lose data due to battery failure. (See page 10 for more info.)

[See Advertising, page 64.]

Availability ..... NOW
Medium ..... Flash ROM Card
Pricing:
- 1MB $199
- 2.5MB $399
- 5MB $599
- 10MB $999
- File compression software . $40

CONTACT: *SUNDISK CORPORATION 3270 Jay Street, Santa Clara, CA 95054, USA; Phone: 408-562-0500; Fax: 408-980-8607*

Wireless Communications

PSILink Messaging Service

PSILink lets your 95LX compose, send, and receive messages via wireless or phone/modem transmission, to Internet, AT&TMail, MCI-Mail, USENET, BITNET, and other connected global messaging networks.

PSILink provides worldwide dial-up access in over 30 cities in North America and 40 more throughout Europe and the Pacific Rim. PSILink provides wireless access through RAM Mobile Data and paging services through SkyTel/SkyWord.

Dial-up access with PSILink requires the 95LX and a modem, wireless access requires a 95LX, HP's Mobile Data Link cradle, and a GE's Mobidem wireless transmitter. PSILink software for the 95LX provided free of charge to subscribers.

[See Advertising, page 23.]

Availability ..... Now
Software Medium ..... Floppy Disk
Runs under SysMgr ..... Yes
Basic Service Fees:
- 12-2400 bps transmission . $19/mo
- 9600 bps transmission ... $29/mo

Wireless options (additional)
- One-time registration fee $50
- Monthly fee $50*

*(*Flat rate for first 6 months of service if sign up by Dec 31, 1992.)*

CONTACT: *Performance Systems International, Inc., 11800 Sunrise Valley Drive - Suite 1100, Reston, VA 22091, USA; Phone: 703-620-6651; Fax: 703-620-4586.*

HP Cradle Accessory Box

This empty black plastic shell is for developers who wish to create a product that interfaces with the 95LX via the HP Mobile Data Link cradle. It comes with drawings for overlays and 2 PCB's to mount internally. Battery compartment can flexibly hold a 9 volt block-type battery or 2 AA batteries.

Availability ..... NOW
Pricing
- 1 to 9 units ..... each $12.50
- 10 to 49 units .... each $9.95

CONTACT: *EduCALC, 27953 Cabot Road, Laguna Niguel, CA 92677, USA; Phone: 800-677-7001 or 714-582-2637; Fax: 714-582-1445.*

RAM Wireless Data Service

RAM Mobile Data offers a two-way wireless data service nationwide. Based on non-proprietary, open protocols, RAM's Mobitex® networks enable subscribers to send and receive data and Email messages via wireless communications. All you need is an HP 95LX, the HP Mobile Data Link cradle, a radio modem such as the SkyStream receiver, and RAM compatible software.

Availability ..... Now
Pricing ..... Varies
CONTACT: *RAM Mobile Data, Three University Plaza, Suite 600, Hackensack, NJ 07601, USA; Phone: 201-343-9400; Fax: 201-343-8795.*

Notify! Lets Desktop Users Send 95LX Wireless Data

Notify! software for Macintosh computers, or DOS and Windows PCs, makes it possible for desktop users with a modem to send calendar appointments, text, spreadsheet data, and E-mail messages to an 95LX equipped with wireless communications system.

For example, a user enters text into Notify!, and the software automatically dials up and sends the message to SkyTel's SkyStream service, which transmits the data to a NewsStream receiver attached to the 95LX.

Notify! also allows other programs, including calendars, spreadsheets and E-mail systems, to automatically transmit data.

Availability
- Macintosh version ..... Now
- DOS, Windows versions Dec 92

Medium ..... Floppy Disk
Runs on PC or Mac, not the 95LX.
Pricing
- Macintosh version $149
- DOS version $149
- Windows version $149

CONTACT: *Ex Machina, Inc., 45 East 89th St, Suite 39A, New York, NY 10128-1232, USA; Phone: 800-238-4738 or 718-965-0309; Fax: 718 832-5465; CompuServe ID: [76004, 3427]; AppleLink ID: EX.MACHINA.*

Software

NOTE: Software listed as "SWITCHable" functions as system-compliant software just like built-in applications if used with SWITCH! 2.0 (see page 25 for more on SWITCH!).

Communications

fastCOMM!

SWITCHable full-featured communications software for the 95LX by the author of |COMMO| (described on page 24 of the Jan/Feb 92 issue and page 44 of the Jul/Aug 92 issue). The program has a rich scripting/macro language for online automation, and Xmodem and Ymodem file transfer protocols.

[See Advertising, page 1.]

Availability ..... Dec 92
Medium ..... Disk
Runs under SysMgr .. SWITCHable
Pricing $89
CONTACT: *ACE Technologies, Inc., 2880 Zanker Road, Suite 103, San Jose, CA 95134, USA; Phone: 800--825-9977 or 408-428-9722; Fax: 408-428-9721.*

Database

fastNOTES!

SWITCHable freeform database for the 95LX by the author of UNO, that lets you create on-screen, time-stamped, "post-it" notes that can be edited, searched, and indexed at any time.
[See Advertising, page 1.]

Availability . . . . . Dec 92
Medium . . . . . Floppy disk
Runs under SysMgr . . SWITCHable
Pricing $69
CONTACT: *ACE Technologies, Inc., 2880 Zanker Road, Suite 103, San Jose, CA 95134, USA; Phone: 800--825-9977 or 408-428-9722; Fax: 408-428-9721.*

Games

Games95

This board games package for the 95LX includes Chess, Checkers, Tetris, Backgammon, and Space Invaders. You can challenge the 95LX, or play a human opponent at different skill levels. According to the manufacturer, the graphics are outstanding and the interface is interactive.
[See Advertising, pages 33-36.]

Availability . . . . . NOW
Medium . . . . . Floppy disk
Runs under SysMgr . . . . . Yes
Pricing $49.95
CONTACT: *Sparcom Corporation, 897 NW Grant Ave., Corvallis, OR 97330, USA; Phone 800-827-8416 or 503-757-8416; Fax: 503-753-7821; CompuServe ID: [75320,2440].*

Lotus Utilities

MultiLink — Lotus Add-In

This Lotus add-in lets you import the desired portions of a large worksheet, and perform Sum and Calculate operations on different external .WK1 files. This means that you can use and work with worksheets that require too much memory to load on the 95LX.

Availability . . . . . NOW
Medium . . . . . Floppy disk
(Specify 3.5" or 5.25")
Runs under SysMgr . . . . . Yes
Pricing $149
CONTACT: *PL Lindlau GmBH, Kolpingring 18, D-8024 Oberhaching, GERMANY; Phone: +49-89-613-12-09; Fax: +49-89-613-40-71.*

Health Care

PALMTOX

Software reference used in the management of the acute overdose patient. Designed using the generic or brand drug name, the program provides toxic dose, peak effects, drug interactions, clinical presentation laboratory and treatment sections.
[See Advertising, page 51.]

Availability . . . . . Feb, 93
Medium . . . . . Flash ROM Card
Runs under SysMgr . . . . . No
Pricing $295
CONTACT: *EM Alternatives, PO Box 152, Mequon, WI 53092, USA; Phone: 414-241-8513; Fax: 414-241-8514.*

Sports

BoxScorer/Real·Time

Box Scorer turns the 95LX into a computerized baseball score book for coaches or fans and compiles a variety of statistics for each player and the team as a whole. The user is able to record the play-by-play using a simple, screen-driven interface that uses Major League score book conventions. Statistical reports can be generated and include the following:

- Year-to-date statistics (25)

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by player, both offensive and defensive statistics.
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- Team pitching box score by game.
- Season schedule with outcomes and scores.
- Team roster (players and coaches) 12 data fields, and the ability to print labels for team mailings.

[See Advertising, page 50.]

Availability ..... Feb/Mar 93
Medium ..... Floppy Disk
Runs under SysMgr ..... No
Pricing $139**
*** additional 15% discount to PTP subscribers!*
CONTACT: *SportsWare Solutions, Bay Colony Executive Park, 565 East Swedesford Road, Suite 101, Wayne, PA 19087, USA; Phone: 800-282-5657 or 215-975-9118; Fax: 215-975-9118.*

Specialized Products

Pocket Field Force

A complete network administration system for national mobile sales teams in the FMCG (Fast Moving Consumer Goods) market sector. The system is comprised of three main components: **The Sales Representative** requires a 95LX, RAM card and modem. The software allows sales reps to create, retrieve, and store data locally and to control, plan, route, and schedule calls while the system-wide EMail facility transmits and receives messages and other information. The **Regional Sales Manager** monitors the activity of each sales rep in the region and produces an automatic end-of-day update report. The Head Office Coordinator is the PC-based element of the system and stores and centrally organizes all the data.

[See Advertising, page 62.]

Availability ..... NOW
Medium ..... Floppy Disk
Runs under SysMgr ..... Yes
Pricing ..... Varies
CONTACT: *Richard Hill, C M Software, Business Unit 1, 33 Sandford Road, Littlemore, Oxford OX4 4XT, UNITED KINGDOM; Phone: +44 0865 748875; Fax: +44 0865 748873.*

PodiumPal

This presentation manager for the 95LX helps you create, organize, time, and deliver your speeches and other presentations. PodiumPal lets you create up to 12 "notecards" per speech, each of which can have 6-10 lines of copy. A large font makes it easier to see the information during the presentation.

A built-in clock helps to keep the presenter on schedule. It displays a countdown for the length of the presentation in the upper left of the 95LX display. A bottom right display ticks off time for each notecard. A warning flashes when its time to wrap up.

An internal quotation directory includes 100 famous motivational and inspirational quotes. The package comes with *Making an Impact*, a step-by-step guide to public speaking.

[See Advertising, page 33-36.]

Availability ..... NOW
Medium ..... Floppy disk
Runs under SysMgr ..... No
Pricing $89.95
CONTACT: *Sparcom Corporation, 897 NW Grant Ave., Corvallis, OR 97330, USA; Phone: 800-827-8416 or 503-757-8416; Fax: 503-753-7821; CompuServe ID: [75320,2440].*

QC-LINK/HP

This data acquisition and quality control charting software allows instrument data to be sent to the 95LX through the RS 232 serial port. Incoming data can be sent to a file or directly into a Lotus spreadsheet. Data can be selectively parsed and keyboard macros applied automatically.

The Quality Control portion of QC-LINK/HP allows a variety of relevant plots to be generated, including X-bar, R-bar, Sigma, and Histogram. Each of these is updated in realtime as new data arrives or is generated from imported ASCII files.

QC-LINK/HP calculates a wide range of SQC statistics automatically. Mean and standard deviations, capability indices, and performance statistics are computed and can be viewed and updated in realtime. Statistics can be customized through user designed statistical reports.

[See Advertising, page 43.]

Availability ..... NOW
Medium .. Floppy disk or RAM card
Runs under SysMgr ..... No
Pricing Floppy disk version ... $395
RAM card (256K) version . $535
RAM card (1MB) version . $720
PC version (add to above) $195
CONTACT: *Labtronics Inc., 95 Crimea St., Guelph, ON, N1H 2Y6, CANADA; Phone: 519-767-1061; Fax: 519-836-4431.*

Utilities

MultiDay

MultiDay displays the Appointment Book file in a format where more than one day can be seen at a time. MultiDay can be run under SysMgr via an EXM loader file. MultiDay displays as many appointments as will fit on the 95LX screen, and can be freely scrolled backwards and forwards. Bars between days and weeks visually separate appointments. MultiDay divides the calendar into sections the length of which is defined by the user (typically 90-360+ days). This avoids the excessive overhead of displaying repeat appointments that are scheduled for many years.

All aspects of an appointment can be displayed in MultiDay, so repeat appointment flags, alarms and notes can all be displayed and accessed. MultiDay can search the entire appointment calendar very rapidly, since it scans the file to find a matching appointment, rather than scan forward day by day as the Appointment Book program does. Registered versions of the software search the entire calendar, while unregistered versions just search the current section.

MultiDay shows the actual appointments themselves. A zoom feature removes all status lines, so display shows 16 lines of appointments.

Availability ..... NOW
Medium ..... Floppy disk
Runs under SysMgr ..... Yes
Shareware Registration Fee ... $15
Can be downloaded from CompuServe's HP HANDHELD forum.
CONTACT: *C. E. Steuart Dewar, 11622 West 87th St. Burr Ridge, IL 60521.*

Synchronize 2.1

Synchronize is a UNIX-based time organization tool designed for personal and work group use. It uses a client server mechanism and distributed databases to support large numbers of UNIX workstation users. Release 1.2 of Synchronize will support data transfer to and from the HP 95LX Palmtop PC.

Availability ..... Dec 92
Medium ..... Floppy disk
Runs under SysMgr ..... N.A.
Pricing (per unit installed) $125
(Quantity discounts available.)
CONTACT: *CrossWind Technologies, 6630 Highway 9, Suite 201, Felton, CA 95018, USA; Phone: 408-335-4988; Fax: 408-335-1086.*

SWITCH! Developers Kit

Lets application developers create SWI files that make their programs act system compliant under SWITCH! version 2 on the 95LX. (See pages 10 & 52 for more info.)

[See Advertising, page 1.]

Medium ..... Floppy Disk
Availability ..... Dec 92
Runs under SysMgr ..... Yes
Pricing $99
CONTACT: *ACE Technologies, Inc., 2880 Zanker Road, Suite 103, San Jose, CA 95134, USA; Phone: 800-825-9977 or 408-428-9722; Fax: 408-428-9721.*

On The HP Palmtop Paper on Disk Nov/Dec 92.

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ACT! for the HP 95LX lets you take control of your day while you're on-the-go. This powerful contact manager keeps all the details about your contacts and your calendar at your fingertips. *ACT!* even tracks and reports your expenses. The innovative ZAPCARDS® feature lets you exchange business card and other contact information wirelessly with other *ACT!* HP 95LX users. And, it's all fully integrated and easy-to-use.

Based on best-selling *ACT!* contact management software, this powerful version was designed specifically for HP 95LX users like you. And, it's easy to upload and download information to and from your desktop version of *ACT!* with the included PC connectivity cable.

Take control of your day with *ACT! for the HP 95LX!* Order your copy risk-free for only $99, and save $50 off the retail price! Simply mail the coupon below, or call us toll-free at 1-800-365-0606.

The Portable Way To Control Your Day!

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To order *ACT! for the HP 95LX* at this discount price, complete coupon and mail to Contact Software Int'l., *ACT!* HP Offer, 1840 Hutton Drive, #200, Carrollton, TX 75006. Allow 2-3 weeks for delivery.

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Word Processing

fastWRITE!

A SWITCHable full-featured word processor from the author of VDE for the 95LX that includes support for popular formats and a spell checker.

[See Advertising, page 1.]

Medium . . . . . Floppy disk
Availability . . . . . Jan 92
Runs under SysMgr . . SWITCHable
Pricing $99
CONTACT: *ACE Technologies, Inc., 2880 Zanker Road, Suite 103, San Jose, CA 95134, USA; Phone: 800--825-9977 or 408-428-9722; Fax: 408--428-9721.*

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Upgrades, Updates, Corrections

Significant Error in MEDSTF.ZIP

Two of the medical PBK files in MEDSTF have sig ficant errors in them. The entries in LABUK.PBK and LABUSA-.PBK listed as "Glucose (fasting) 2" are in error. Please change line "(Increased, Con't.)" to "(Decreased, Con't.).

Then renumber "Glucose (fasting) 2" to "Glucose (fasting) 4" and "Glucose (fasting) 3" to "Glucose (fasting) 2". Finally, renumber "glucose (fasting) 4" to "glucose (fasting) 3". This reverses the order of the original 2 and 3 entries.

Robert S. Williams, MD.

SWITCH! version 2

A menu-driven environment for all of your 95LX programs. Now allows SWITCHable applications to operate as built-ins. Includes control panel, DirectLaunch, CapsDisplay, Block Cursor and more. (See pages 25 & 54 for more information.

[See Advertising, page 1.]

Availability . . . . . Dec 92
Medium . . . . . Floppy disk
Runs Under SysMgr . . Yes
Pricing $69
CONTACT: *ACE Technologies, Inc., 2880 Zanker Road, Suite 103, San Jose, CA 95134, USA; Phone: 800-825-9977 or 408--428-9722; Fax: 408-428-9721.*

95Buddy, Version 2.3 Adds Features

95BUDDY is a utility that adds dozens of features and keystroke shortcuts to the built-in HP 95LX applications (see page 6, July/August for more information on 95BUDDY). Release 2.3 of this "keyboard companion for the HP 95LX" adds many new features, including:

- Unique default directories for each built-in application.
- Automatic "goto" function for Filer (like Phone)
- Paste to the phone card editor.
- 10 preset file "hot" keys to file open/save menus.
- Quick date/time stamp entry in MEMO, Phone, or APPT.
- Change titles of name, number, and address fields in Phone Book card editor.
- Find & replace function added to the search functions.
- Case function added to MEMO for quick character case change while editing existing text.
- Delete to end-of, start-of, and entire line functions.
- Add labels to user (CHAR) keys.
- Appointment alarms can be extended for up to 8 minutes.
- Supports WEEKABK ver. 3 (does not enhance older WEEKABKs).

Availability . . . . . NOW
Medium . . . . . Floppy disk
Runs under SysMgr . . . . . Yes
Pricing (Shareware fee) $40
Upgrade for 1.0 users . . . . . free
(Include $5 for postage/disk)
CONTACT: *Jeffrey Mattox, P.O. Box 45282, Madison, WI 53744-5282. CompuServe ID 71044,2356.*

COMPUSERVE: *95BUDDY release 2.3 is also available in library #7 of the HPHAND forum along with WEEKABK and CMCALC, new versions of a week-at-a-glance, and technical calculator programs originally available on the 1992 Subscribers disk. You may register 95Buddy using CompuServe's GO SWREG.*

On The HP Palmtop Paper on Disk MEDSTF.ZIP on Jul/Aug 92 issue. New versions of 95BUDDY, WEEKABK, and CMCALC on Nov/Dec 92 ON DISK issue.

Loader Included with SWITCH! 2.0 Makes ACT! SWITCHable

This SWI file included with SWITCH! 2.0 makes ACT! for the 95LX a SWITCHable application. Must be used with ACT! and SWITCH! 2.0 on the 95LX.

CONTACT: *ACE Technologies, Inc., 2880 Zanker Road, Suite 103, San Jose, CA 95134, USA; Phone: 800-825-9977 or 408-428-9722; Fax: 408-428-9721.*

ACT! for Windows Upgrade Will Exchange Data With ACT! for the HP 95LX

The initial release of ACT! for Windows could not exchange data with ACT! for the HP 95LX. Version 1.02, to be released in Dec 92, will be able to communicate with the 95LX. Current users of ACT! for Windows will receive a free upgrade.

CONTACT: *Contact Software International, 1840 Hutton Drive, #200, Carrollton, TX 75006, USA; Phone: 800-365-0606 or 214-919-9500; Fax: 214-919-9750.*

LoanSTAR — Correct Phone

This mortgage finance program for mortgage originators or real estate sales personnel sets the 95LX up to do a number of useful loan calculations. It was described on page 40 of the July/August 92 issue. The correct company name and phone number is listed below.

[See Advertising, page 59.]

Availability ..... NOW
Medium . Floppy disk and RAM card
Runs under SysMgr ..... No
Pricing RAM card version $295
Floppy disk version $175
CONTACT: *Pocket Computer Systems, 505 S.E. 15th Street, Gresham, OR 97080, USA; Phone 503-665-6990.*

New Version of MacLinkPLUS

This new version of DataViz's Mac/95LX connectivity kit lets the user backup, transfer, and translate files between the 95LX and any Apple Macintosh. MacLinkPlus/HP 95LX contains a more complete library of file translators, allowing you to translate 95LX formats to many different Mac word processing, spreadsheet, PIM, and other text formats. Also includes 95LX-to-Mac serial cable, and comm software.

[See Advertising, page 69.]

Availability ..... NOW
Software medium ..... Floppy disk
Runs under SysMgr ..... No
Pricing $129
Upgrade to existing
MacLinkPlus users ..... Free
CONTACT: *DataViz Inc., 55 Corporate Dr., Trumbull, CT 06611, USA; Phone 800-733-0030 or 203-268-0300; Fax: 203-268-4345.*

myREMOTE version 2 NOW SWITCHable

Software program lets you use your 95LX as a universal remote control for VCRs, TVs, etc. Now acts system compliant.

[See Advertising, page 4.]

Medium ..... Floppy disk
Availability ..... Dec 92
Runs under SysMgr .. SWITCHable
Pricing $39
CONTACT: *ACE Technologies, Inc., 2880 Zanker Road, Suite 103, San Jose, CA 95134, USA; Phone: 800--825-9977 or 408-428-9722; Fax: 408-428-9721.*

Personal Food Analyst SWITCHable

This nutritional software lets you analyze daily food intake and improve eating habits. Mirical Nutrition Corp. is working to make the software SWITCHable (behave as if it was system compliant).

[See Advertising, page 31.]

Availability ..... Now
Medium ..... Floppy disk
Runs under SysMgr .. SWITCHable
Pricing $289
CONTACT: *Mirical Nutrition Corp., 4606 Northpark Drive, Colorado Springs, CO 80918, USA; Phone: 800-732-7707 or 719-598-5276; Fax: 719-598-5790.*

America Online Update

The America Online (AOL) forum for HP Palmtop users that was announced on page 30 of the September/October 92 issue has been delayed. AOL apologizes to those who have been looking in vain for the special interest group (SIG). The Palmtop group will be ready by the first of the new year.

INTERNET E-MAIL SERVICE FOR THE HP 95LX

- Send and receive electronic mail to subscribers of Internet, CompuServe®, AT&T Mail™, MCIMail™, and all other connected networks in the global messaging matrix.
- $19 per month - *flat rate* - for dialup access in most major U.S cities.
- Wireless access is available for $50 per month - *flat rate* - through RAM Mobile Data if you sign up by December 31, 1992.
- If you are an HP 95LX owner, contact PSI to sign up for PSILink, the most versatile Personal Network Access Service available for your palmtop.

PSILink℠

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SkyStream Wireless Receiver

Tired of having to connect up to a modem or telephone to send and receive those important messages? You may need a wireless receiver!

By Rick Shaddock

Many of us were first introduced to wireless communications on the old Startrek show, when Captain James T. Kirk took out his communicator and uttered those now famous words, "Beam me up, Scotty!"

We can't quite beam people up (yet), but the 95LX can send and receive wireless messages on the go, in hostile (alien) environments.

Wireless communications networks such as SkyStream by SkyTel Corp. and EMBARC by Motorola, Inc. enable HP 95LX users to receive wireless messages, electronic mail, and other types of critical information directly in their 95LX at any time, in thousands of cities and towns across North America. This article focuses on SkyStream. Following issues will focus on EMBARC and other wireless products and services.

The Hardware

The SkyStream system consists of a SkyStream receiver, the HP Mobile Data Link Cradle that connects the receiver to the HP 95LX palmtop PC, and Mobile Data Link (MDL) software for managing the messages. The integrated 95LX and MDL SkyStream can be carried in a coat pocket.

The SkyStream one-way radio frequency modem is powered by one AA battery. The receiver connects to the 95LX in the cradle via the serial port to download messages. The unit measures 3.4" x 2" x .75" and weighs 3.5 ounces. It has its own 32K buffer memory to store messages even when not connected to your PC.

A switch allows it to beep or remain silent. A green LED blinks when messages are in memory and rapidly when the buffer is full. A red LED flashes to indicate low battery or being out of range. It can receive individual messages, group messages, or news from information subscription services.

As shown in the photo above, the accessory cradle combines the pager and palmtop into a single, consistently styled unit. The palmtop slides in from the left, the pager from the right. You can plug an AC adapter and serial cable into the back of the integrated unit.

Using the cradle does make the 95LX bigger than pocket-sized. An alternative is to use two serial cables with a null modem adapter, or the 4x4 2' cable (EduCALC, Stock #2624) to connect the pager to the 95LX. This lets you carry the 95LX and the pager in smaller pockets, then cable them up when the pager beeps. It is also possible to connect the SkyStream receiver to any desktop computer's serial port.

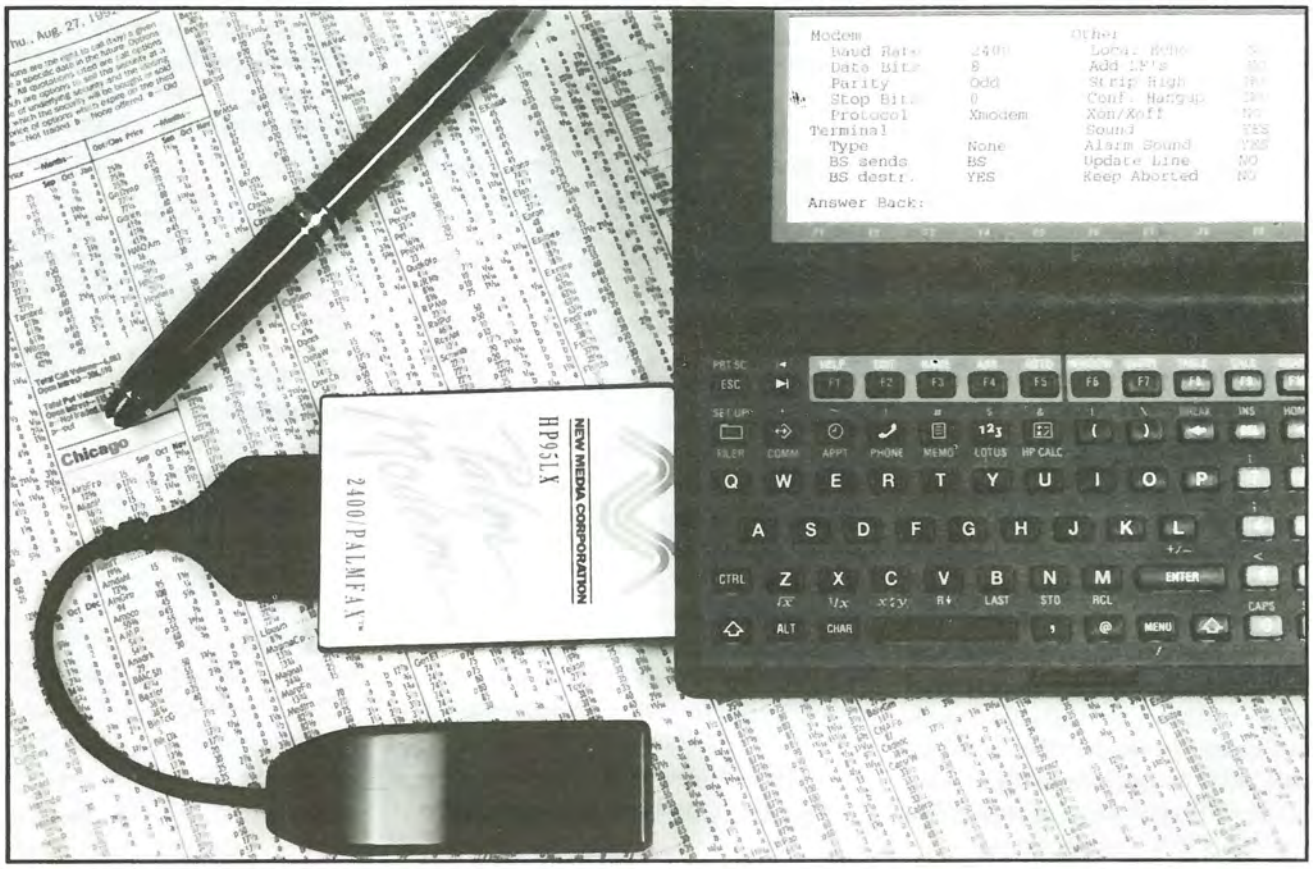
Mobile Data Link Software

SkyTel's software comes on a ROM card. MDL.EXM is a program to receive messages from the pager, and SKYACCS.EXM, a program to compose text messages to be uploaded by modem. The software can be copied from the ROM card to the RAM disk. Messages flow from the receiver to

ABOUT THE AUTHOR

Rick uses his 95LX and SkyStream to keep in contact with his office while teaching HP 95LX classes and consulting nationwide with Computer Instructors Company. You can reach Rick at 800-507-9898 or 202-829-4444. His CompuServe ID is [70642,647], his Sky-Page pin # is 2277563.

HP 95LX PalmModem™



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Fax: 714.453.0114

CompuServe, Genie, Dow Jones and MCI are trademarks or trade names of their respective entities.

the 95LX whenever the Mobile Data Link software is active. If the 95LX is off, it automatically turns on to receive the message, then turns off again.

For more detailed information on the hardware and software, see "The HP 95LX and the Motorola SkyStream Receiver," page 4 of the Fall 1991 issue.

SkyTel's 800 # Support Services

Suppose Joe is on the road with his HP 95LX, MDL and SkyStream receiver while Sue is back at the home office. She can send messages to Joe at any time, in thousands of cities and towns across the United States, Mexico, Canada and the Pacific Rim (other locations soon to be added). Sue can utilize a variety of mnemonic toll-free services to contact Joe.

800-SKY-PAGE (1-800-759-7243)
For numeric messages, Sue calls this 800 number from any touch-tone phone, enters Joe's Personal Identification Number (PIN) and presses "#". She enters her phone number and hangs up. Sue could have entered up to 20 digits of information, or special codes to trigger special Prefix equivalents Joe enters in his 95LX. Sending digits: "122" could cause "122 Call office now!" to display to Joe in MDL on the HP 95LX.

800-SKY-WORD (1-800-759-9673)
Sue could use her PC's modem to send text messages, electronic mail, update appointment and phone book files, to-do lists, memos and spreadsheets. She could use any communications software to log on, enter Joe's PIN, and enter a message up to 240 characters. SkyWord Access software is specifically designed for sending messages via SkyTel, including such features as setting up a group of PIN numbers to call up to 40 recipients. Sue can also specify a day and time to deliver the message to Joe. She could issue a wake-up beep for Joe at 6:00 am. Sue types in the message, presses [F5], and SkyWord Access automatically dials Skytel and transmits the message. Sue could have used the SkyWord Access 95LX version with her modem as well.

About one minute later, Joe's SkyStream receiver beeps and the green LED flashes in response to its unique number. (The beep can be silenced via a switch.) If Joe is busy, the message is stored in the receiver's 32K RAM memory buffer, ready to be retrieved when Joe turns the 95LX on and presses Alt-COMM to run the Mobile Data Link Software. If the 95LX is already running Mobile Data Link, the program will flash "receiving message". Joe reads the message by highlighting the desired entry in the index and pressing [ENTER].

Sue can code messages to tell the System Manager compliant Mobile Data Link software to automatically add the text to a MEMO, PHONE, APPT file, or import the data into a Lotus Spreadsheet. When the message enters the HP 95LX, it is stored as a temporary file. The first few characters of the message are compared against Joe's prefixes. If there is no match, the message is placed in an incoming message file so Joe can read it and manually handle it as regular E-mail. For example, Sue could update Joe's Appointment Book by sending:

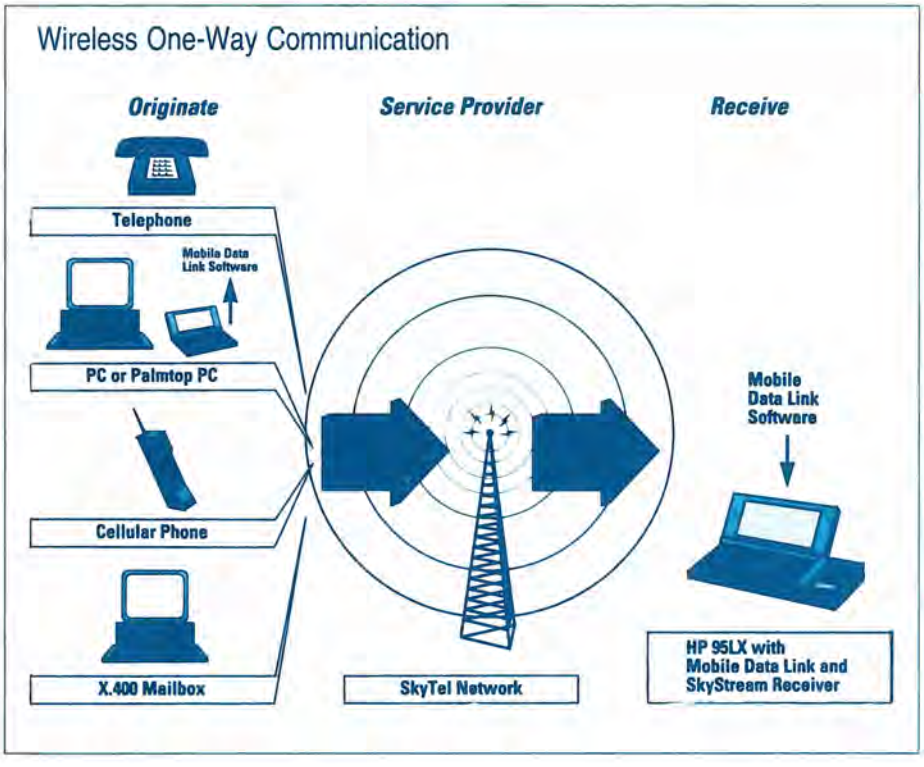
> APPT 92/12/3 9AM-10AM "Board Meeting" "Note: Don't forget to bring your seminar notes."

800-SKY-GRAM (1-800-759-4726)
If Joe has this service, and Sue has only a touch tone phone, she would reach a National Dispatch Center operator to send an alphanumeric message up to 80 characters to Joe. Sue would have to spell out the specific characters for the N.D.C. operator to send, so automatic phone and appointment book updates are not suggested.

800-SKY-TALK (1-800-759-8255)
If Joe has the Voice Mail service, Sue can leave a verbal message. Joe's receiver beeps to signal him to call SkyTalk to hear Sue's message.

800-SKY-MEMO (1-800-759-6366)
If Sue does not have an HP 95LX, she can purchase an Alphamate keyboard unit from SkyTel, or other third-party software for sending text messages by SkyWord to Joe.

800-SKY-USER (1-800-759-8737)
Sue or Joe can call for a customer service representative 24 hours a day.



Comparison between EMBARC and SkyTel	
EMBARC	SkyTel
■ Both use the HP 95LX, and Accessory Cradle; ■ Both use a Motorola receiver; ■ Both offer electronic messaging to the HP 95LX; ■ Both are national RCC's (Radio Common Carriers); ■ Both are very cost effective for messaging	
Broadcasts on 931.8 MHz	Broadcasts on 931.9 MHz
No touchtone, modem, e-mail service used	Paging via variety of 800 #, modem, e-mail
A variety of USA Today News, Sports, Health, Business news broadcast every day to HP 95LX	Sky-News not yet available
1500 bytes/message, software will recombine longer messages seamlessly	240 bytes per message. HP 95LX can append messages together
Sender can choose 15 minute, hour, or 3 hour delivery times	Message received within 60 seconds
Sender is billed on a variety of plans	Receiver is billed on a variety of plans
A variety of larger groups can be defined	User defined groups of 40, broadcast unlimited.
200 cities in US & Canada as of November 1992.	250 cities US, 75 Canada, 25 Mexico, Singapore

How Wireless Messaging Works

When you send a message or digits, you dial a computer which uploads the message by satellite dish to one of two satellites in geostationary orbit 22,300 miles in space--such as Westar IV. The satellite retransmits the signal in a wide band to about 200 (and growing) receiving disk stations across North America. Each receiving station rebroadcasts the signal on a specific frequency (931.9375 MHz) to all SkyTel pagers within its range. Each message is preceded by its PIN "calling card" signal. Joe's SkyTel receiver may actually receive thousands of calls a day, but does not beep or flash until one for his PIN is detected.

SkyTel and EMBARC

SkyTel and EMBARC currently service different communications niches, although both can send personal e-mail. SkyTel covers more cities and emphasizes the short messages (up to 240 characters) and immediate delivery to individuals or groups of 40. EMBARC emphasizes less immediate delivery of longer messages (such as 1500 or more bytes) to large groups, and services such as news, sports, and weather. SkyTel can be accessed through a touch tone phone to an 800 number or a modem, while EMBARC is accessed by modem.

You could use the same cradle, but would need the EMBARC software for your PC and HP 95LX. Although the hardware is identical, you would need another receiver programmed to responding to EMBARC's specific frequency. Their services may overlap more and more in the future when SkyTel releases Sky-News some time next year.

Three Experiences

Excerpted below are comments from a team of three Palmtop Paper contributing writers who evaluated the SkyStream system; Robert Williams, Marty Mankins, and Dave Goodman. In future issues, *The HP Palmtop Paper* will be discussing various aspects of this technology and examining possible real world uses. We also hope to try out Motorola's EMBARC service and contrast it to our experiences with Skytel.

Dr. Robert Williams' Comments

I'm a physician, and I love the automatic Appointment update feature, which can be used to change my schedule instantly.

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My office uses a PC with a modem and the Skyword Access software to send the schedule update to me. The changes are automatically inserted in my appointment book. My office also forwards Lab results and other key information on patients while I am running around.

My office secretary can now better coordinate my activities and get important information to me instantly – with absolutely no additional effort on my part! My office can more effectively act as a base station where hospital personnel, patients, and families can contact me and get fast attention.

One of the challenges of being a physician is that the database of medical knowledge is growing very fast. I can see wireless information technology becoming instrumental in keeping physicians up-to-date in vital areas. For example, pharmaceutical companies could quickly keep me abreast of newly-discovered benefits or side effects associated with individual drugs."

[Robert Williams is a Physician and contributor to The HP Palmtop Paper.]

Marty Mankin's Comments

I had read a lot about the SkyStream (and Motorola's NewsStream) and was impressed by the descriptions of how it worked. I had an even greater rush when I actually held the small receiver in my hand - 3.5 ounces! I put the HP 95LX in the Mobile Data Link (MDL) and put the SkyStream receiver in the other side. I needed the help of the printed documentation to send messages at first, and I only sent numeric messages until I loaded the SKYWORD software on the 95LX (which allows text messages to be sent via modem).

The "SkyTalk" option lets you send voice messages to an E-mail box. Once a message is left, the system then sends a coded numeric message to the pager. The coded message tells the 95LX user that they need to call the system and retrieve the voice message left for them.

I am eventually getting used to the excitement of seeing my messages sent out, without being connected to a telephone line!

I've been using SkyStream for the past few weeks and I'm very impressed with its ability to meet my on-the-go communications needs. The more I use SkyStream, the more I feel in touch with the world.

[Marty Mankins is the publisher of Take It With You, The Newsletter for Palmtop Computing. Contact: Perfection Applied, 454 West 1010 North, Orem, UT 84957, USA.]

Dave Goodman's Wireless Scenarios

SkyStream from SkyTel Communications is one of the new wireless communication services available for the HP 95LX. By combining a pocket pager with a palmtop computer, you've got a system that allows you to receive text and numeric messages wherever you are. Here are some possible wireless scenarios:

- You're at the airport and your pocket starts beeping. You take out your 95LX and SkyStream pager and open the 95LX as it powers up and displays the message your secretary just sent: "Return to ofc. You forgot your passport!"

- You're with a prospective home buyer who wants to know what houses are in the area for less than $150,000. You call the office, and they send listings right to your 95LX.

- You're about to enter a boring meeting. You page yourself (timed delivery five minutes later). The pager goes off and you're outta there!

Sending a message to a SkyStream pager is so easy a child could do it. All of the SkyTel access numbers are toll-free, so the sender doesn't have to worry about the phone bill or search for spare change.

[Dave Goodman is a Software Project Manager for a Northern California software publisher. His CompuServe ID is [72330,130].

Plans for the Future Around the World

SkyTel, the pioneer of nationwide messaging, will soon link countries around the world for global messaging. Developments to offer SkyTel service are now under way in Europe and South America.

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CONTACT: *Hewlett-Packard Dealers, or resellers such as EduCALC; Phone: 800-677-7001 or 714-582-2637; Fax: 714-582-1445.*

SkyStream Receiver
CONTACT: *Hewlett-Packerd Dealers, or resellers such as EduCALC (see above).*

SkyTel SkyStream Service
CONTACT: *SkyTel at 800-456-3333, ext. 0178.*

EMBARC
CONTACT: *EMBARC/Motorola; Phone: 407-364-2000; Fax: 407-364-3683.*

Four-By-Four Serial Cable
CONTACT: *EduCALC (see above).*

SWITCH! 2.0 Makes It Easy To Create and Run New System-Compliant 95LX Applications

SWITCH! 2.0 will bring about many new system-compliant applications, including SWITCHable versions of ACT!, VDE, COMMO, UNO, Personal Food Analyst, and myREMOTE.

[A programmer's look at SWITCH! is on page 52 of this issue — Rich.]

By Mark Scardina

Hewlett Packard's HP 95LX was a success from the first day it was introduced. Not only did the 95LX come with Lotus 1-2-3, but it also included a group of very useful, easy to use, and easy to access personal information manager (PIM) applications.

One of the things that made the built-in software easy to use was the fact that you could switch from one application to another at the touch of a button. HP and Lotus (the software developer for the 95LX) made this possible by adding a second, more powerful and user-friendly operating system to 95LX. This built-in system is called the "System Manager."

All of the built-in applications are written to be "compliant" with the System Manager. This, among other things, means that they can be left running when other programs are accessed. For example, you can go to MEMO to make a note, switch to PHONE to call someone to ask a question, and go back to MEMO again and note down the answer.

It's possible to create additional "System-Manager compliant" (also called "system compliant") applications to work in conjunction with the built-in applications. For example, a developer could create a more sophisticated word processor with a spell checker and install it on the 95LX to work like any of the built-in applications. To be able to create system compliant applications, developers need specific technical information on how the System Manager operating system works.

HP has provided some of this information and other programming tools to third party developers so that additional system compliant applications could be developed. However, much of the Lotus/HP information has not been released, making it difficult for the over 1,000 registered third-party developers to write system-compliant applications.

Loaders: The First Step Towards System Compliancy

Many programs that run on a desktop PC can also run on the 95LX. But if a program is not system compliant, then all other applications need to be closed before the program can be run from FILER. About a year ago an Israeli programmer named Uri Thier developed a "loader" program as part of Essex Marketing's UTIL Forth package. The loader, which partially remedied the situation, is a small .EXM software program that allows DOS applications to be run while the PIM applications (except Lotus 1-2-3) are still open. However, Uri's loader did not allow you to switch back and forth between applications.

SWITCH! 2.0 Expands HP 95LX Customizability

This newest version of SWITCH! greatly enhances System Manager's capability to accommodate DOS applications. Developers can easily modify their DOS programs to become "SWITCHable" while maintaining their application's DOS compatibility. Here's how it works.

Any DOS application advertised as being SWITCHable will come with a special Switch (.SWI) file. Any 95LX user with a copy of SWITCH! 2.0 will

ABOUT THE AUTHOR

Mark Scardina is a computer consultant based in San Francisco, specializing in palmtop-based applications. He can be reached at 415-681-9672 or CompuServe ID: [76711,732] for commercial projects.

be able to use a SWITCHable application like it was a built-in, system-compliant program. That means single hotkey launching, and switching back and forth between all other built-in or SWITCHable applications. You will be able to pick and choose from SWITCHable applications and customize your 95LX exactly the way you want to.

New SWITCHable Applications Coming Soon

Ed Keefe takes a more technical look at SWITCH!, in this month's Programmer's Corner (see page 52). The rest of this article will describe some of the third-party applications that will soon be SWITCHable.

ACT! – Contact Manager

One of the most eagerly awaited application for the 95LX has to be ACT!. This industry-standard contact management program makes perfect sense in a pocket size computer. Unfortunately, its initial release was not System-Manager Compliant. This reduced its appeal greatly even though it was quite reasonably priced. The new version will be SWITCHable and share all of the characteristics of the built-in applications. For example, you will be able to switch between price lists or financial models in Lotus to your contact file in ACT!.

ACT! is a big program, requiring a 1MB 95LX to take full advantage of its SWITCHability, but with this new capability it will quickly set the contact management standard in the palmtop world.

fastCOMM! – COMM Alternative

Many of you are familiar with Fred Brucker's (COMMO) 💾. (See review, page 24 of the Jan/Feb 92 issue and product announcement, page 44, July/Aug 92 issue.) This new version is not only SWITCHable, but includes Function-key menus similar to those of the built-in applications.

FastCOMM! also supports the 95LX's 16-line screen and uses the MENU key to pop up a menu bar of Bulletin Board Services, which includes CompuServe, Genie, or any other BBSs. FastCOMM! also adds CompuServe B+protocol (9600 baud) to its protocol set which includes X-Modem, Y-Modem, Y-Modem-G.

A SWITCHable fastCOMM gives you the ability to be online in CompuServe and get information from MEMO, PHONE, or APPT without having to disconnect.

fastWRITE – MEMO Alternative

Many consider MEMO the 95LX's most limited application. Fortunately, Eric Meyer has created an advanced 95LX version of VDE 💾, his highly popular word processor (see product description, page 41 of the Fall 91 issue). fastWRITE! is a SWITCHable word processor that includes a fully-

💾 *Find it on The HP Palmtop Paper ON DISK, COMMO, not fastCOMM! on Jul/Aug 92 issue, VDE, not fastWRITE! on Jan/Feb 92 issue.*

RECEIVE *WIRELESS* ELECTRONIC MESSAGES & FILES ON YOUR HP 95LX FROM MOST E-MAIL SYSTEMS

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To learn more about EMBARC and how to send wireless electronic messages from your e-mail system, call 800-333-6200 or fax this form to 800-388-4147.

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integrated spell checker (fastSPELL!). Import from, and export to a wide variety of word processors, including WordPerfect, WordStar, Microsoft Word, and XYWrite. A two-line Function-key menu helps access fastWRITE!'s many features.

Unlike MEMO, fastWRITE! supports a wide range of printers, has the ability to use proportional fonts, and allows editing of multiple files. fastWRITE! brings a full-featured word processor to the 95LX, using one tenth the memory of equivalent PC products.

fastNOTES! — Freeform Database

Many people have used the PHONE application as a simple database but long for a more flexible and useful one. I reviewed Mike Gardi's Useful Notes, UNO on page 10 of the Jul/Aug 92 issue. UNO is a small, fast, freeform database that lets you create notes that can be edited, searched, and indexed at any time. FastNOTES! is the new, SWITCHable 95LX version that, like PHONE, is now loaded with a hotkey such as [ALT]-[PHONE].

Cut and paste capability and other features have been added to fastNOTES!, including a two-line Function-key menu. FastNOTES! is the ideal program to keep track of all the various pieces of information that you pick up during the day. While it does not have the reporting and query capabilities of a more sophisticated database program, its array of features and presentation are ideally suited to the 95LX.

Find it on The HP Palmtop Paper ON DISK, May/Jun 92.

A New Set of PIMs

SWITCH! lets the user assign a hotkey to start a SWITCHable (or any other system compliant) application. For example, the user could use SWITCH! to assign [ALT]-[MEMO] as the hotkey for fastWRITE! You can even have SWITCH! make fastWRITE! the main word processor by assigning it to [MEMO] and relegating the built-in MEMO program to [ALT]-[MEMO].

This means that one could have a much more powerful set of Personal Information Management (PIM) tools than provided by HP, available at the push of a button. Simply use SWITCH! to assign fastCOMM! to [COMM], ACT! to [APPT], fastNOTES! to [PHONE], and fastWRITE! to [MEMO]. Lotus 1-2-3 and HPCALC do not need replacements. Since these alternative programs are small and customized for the HP 95LX, they could reside on, say, a 512K RAM card. This combination turns the 95LX into a more powerful pocket-sized tool.

Conclusion

Other applications are being made SWITCHable, including Personal Food Analyst from Mirical and myREMOTE from ACE. SWITCH! version 2 will be available in December from ACE Technology.

The HP 95LX is an ideal computer for specialized applications. Physicians use it on their rounds; lawyers use it in the court room; surveyors use it on site, and world-class bicyclists use it (literally) on the road.

Ironically, one of the only major criticisms of the 95LX is that it's not as easy to customize as it should be. Hopefully SWITCH! will help to change this situation. As developers make more SWITCHable applications available, a 95LX equipped with SWITCH! 2.0 will truly become a versatile "Personal Digital Assistant."

Order Information

SWITCH 2.0 — $69
Available ..... Dec, 1992
Menu-driven user interface giving instant access to built-in and DOS programs.
CONTACT: *ACE Technologies, Inc., 2880 Zanker Road, Suite 103, San Jose, CA 95134, USA; Phone: 800-825-9977 or 408-428-9722; Fax: 408-428-9721.*

SWITCH 2.0 Developers Kit — $99
Available ..... Dec, 1992
Tools necessary for program developers to create SWI files necessary to make their programs SWITCHable.
CONTACT: *ACE Technologies, Inc. (see above).*

ACT! Loader (Come with SWITCH! 2.0)
Loader (SWI) file that makes ACT! for the 95LX (see below) a SWITCHable application.
CONTACT: *ACE Technologies, Inc. (see above).*

fastCOMM! — $89
Available ..... Dec, 1992
SWITCHable version of COMMO communications software for the 95LX.
CONTACT: *ACE Technologies, Inc. (see above).*

fastWRITE! — $99
Available ..... Jan 93
SWITCHable version of VDE full-featured word processor/spell checker for the 95LX.
CONTACT: *ACE Technologies, Inc. (see above).*

fastNOTES! — $69
Available ..... Dec, 1992
SWITCHable version of UNO freeform database for the 95LX. CONTACT: *ACE Technologies, Inc. (see above).*

myREMOTE — $29
Available ..... Dec, 1992
SWITCHable; lets your 95LX replace your IR remote controls (TV, VCR, etc.).
CONTACT: *ACE Technologies, Inc. (see above).*

ACT! for the 95LX — $99
Available ..... Dec 1992
Contact manager for the 95LX. CONTACT: *Contact Software International, 1840 Hutton Drive, #200, Carrollton, TX 75006, USA; Phone: 800-365-0606 or 214-919-9500; Fax: 214-919-9750.*

Personal Food Analyst — $289
Available ..... Dec, 1992
SWITCHable nutritional software that lets you analyze your daily food intake and improve your eating habits.
CONTACT: *Mirical Nutrition Corp., 4606 Northpark Drive, Colorado Springs, CO 80918, USA; Phone: 800-732-7707 or 719-598-5276; Fax: 719-598-5790.*

Want to Change TV Channels With Your 95LX? myREMOTE Can Do It!

myREMOTE turns your HP 95LX into a programmable remote control for your entertainment system.

By Mark Scardina

The HP 95LX is most often thought as a personal productivity tool. This month we will look at a program that has nothing to do with productivity, but does demonstrate the uniqueness of the 95LX. One of the least known features of the 95LX is its infrared transmitter and receiver port. While HP envisioned them to be used for data transfer between two 95LXs, they are never used by the vast majority of owners. Dave Goodman felt that this was a feature that shouldn't be neglected so he developed *myREMOTE: universal remote control software for the 95LX.*

myREMOTE Features

myREMOTE allows you to use your 95LX to control TVs, VCRs, Stereos, and most other infrared controllable devices. It does this by memorizing the infrared patterns generated by your remote controls and storing them under keys on your 95LX. Up to 100 keys can be saved in one file, which can be loaded whenever myREMOTE is launched.

myREMOTE does not stop there. You can assign a description to each key telling what it does, and you can create macros similar to the 95LX's CHAR-Function keys. These macros can send multiple commands and can even be programmed for prompts, timer or delayed operation. For example, one key press could turn on your TV, turn on your stereo, adjust the sound level of the TV, dim the lights, and go to your favorite channel. While you can purchase dedicated universal remote controls, none have this level of descriptive or macro capability. Besides, myREMOTE gives you the chance to demonstrate the value of the 95LX to your loved one.

Using myREMOTE

Using myREMOTE is a straight-forward process thanks to the sample files included with the program. Upon launching myREMOTE, you are presented with a list of the currently programmed keys. Adding or modifying an entry is performed by simple menu selections. For example, pressing CTRL-E puts you in myREMOTE's edit mode, then press T to "train" the current highlighted key. Place the front of your TV or VCR remote control with 1-2 inches of the 95LX's infrared port (right side of case next to the serial port). Press the desired key on your remote control and myREMOTE "memorizes" this command and can save it in a file.

To use your 95LX as a remote control, go into myREMOTE and press the key the command is assigned to, or highlight its description and press ENTER. In my tests, myREMOTE performed well up to a maximum of 12 feet. I found that the operational distance varied depending on the condition of my batteries. Best performance, as expected, was attained with the AC adapter.

The 95LX with myREMOTE will not work as a remote control with all devices due to the limitations of the 95LX. ACE Technologies, who markets myREMOTE, also provides a free program called REMTEST that allows you to test your different remotes for compatibility prior to purchase.

While I have reviewed many programs for the 95LX, I can safely say that there has not been one as unique or fun as myREMOTE.

Order Information

myREMOTE – $29
Software that lets your 95LX replace you TV/VCR/STEREO remote controls.
CONTACT: *ACE Technologies, Inc., 2880 Zanker Road, Suite 103, San Jose, CA 95134, USA; Phone: 800-825-9977 or 408-428-9722; Fax: 408-428-9721.*

[Mark Scardina is a computer consultant based in San Francisco, specializing in palmtop-based applications. He can be reached at phone: 415-681-9672 or CompuServe ID: [76711,732] for commercial projects.]

Find it on The HP Palmtop Paper ON DISK, Sep/Oct 92.

HOW TO USE

Gaining the Competitive Edge in International Cycling with the HP 95LX!

This member of the Canadian National Cycling Team uses his 95LX to maintain his training diary, monitor his nutrition, manage team and personal finances, and send news flashes to the media.

By Blair Saunders

I have two professions. For half the year I work as a Management Information Systems (MIS) Consultant. For the other half of the year I compete internationally as a member of the Canadian National Cycling Team.

I bought an HP 95LX initially to improve my efficiency at such day-to-day tasks as managing and looking up phone numbers, scheduling appointments, and writing and organizing short memos. I found that the HP 95LX had many advantages over a standard pen and paper day planner, including its size, ability to set alarms and do quick searches, ability to easily modify data, etc.

As I computerized the basic chores I found more and more applications for this personal information system. I soon upgraded to a 1MB 95LX. I now have more than ten times the amount of memory I had with my old 64K palmtop organizer, and because the 95LX is fully DOS compatible, its potential is extensive.

Racing with the HP 95LX

Perhaps the most interesting use I have made of the 95LX has been as a member of the Canadian National Cycling Team. The automation of several important tasks have made me a more efficient athlete, allowing me to accomplish tasks that I just wouldn't have been able to do without the HP 95LX. The automated training system I describe below has helped me reach one of my biggest goals. I developed and used it this season to help me become an alternate on Canada's National Cycling Team.

To help me achieve my competitive cycling goals, I use my 95LX to accomplish the following:

1. Automate my training diary
2. Monitor my nutrition
3. Manage the teams, and my own finances
4. Communicate with the media covering our events

Automated Training Diary

The automation of my training diary was my most pressing need. Since 1992 was an Olympic year, I took my training very seriously. I hate keeping a training diary, but I needed to accurately keep track and compare many variables. This necessitated automation, so I used the built-in applications of the 95LX to create an Automated Training Diary (ATD). To make my ATD most useful, I required three things of it:

1. It had to have a simple user interface to minimize key strokes
2. It had to be able to quickly and easily search the diary entries with any character string combination.
3. It had to be able to create many different training reports from minimal user input.

ABOUT THE AUTHOR

[Cycling by summer, speed skating and cross country skiing by winter, Blair proves the worth of variety. The other side of his multifaceted lifestyle currently has him coding a Mac interface to a Sybase Data Base as an M.I.S Consultant. His favorite activities include winning and making money.]

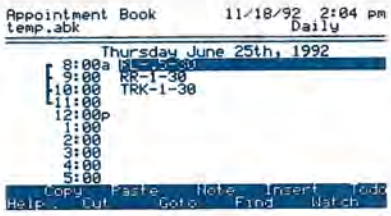
The system I developed with my 95LX provided many advantages over my old pen and paper system. Perhaps most importantly, since I carry my 95LX where ever I go, I can easily update my diary whenever I have a spare moment. This makes this system's entries far more complete than the old pen and paper system.

Secondly, the ability to "automagically" analyze and summarize the data makes this system much easier to use than a tedious pen and paper system.

Many components make up my continually evolving ATD, all of which are implemented with the 95LX's built-in applications. Here's how I use the 95LX's built-in applications to help give me an edge in the highly competitive world of international cycling.

Appointment Book

I use a User Definable Function Key to load APPT with DIARY.ABK, my ATD diary file. (Please see page 41 of the March/April 92 issue or page 21-14 in the *HP 95LX User's Guide* for more on User Defined Function Keys.) I use each line, starting with 8:00a to record a one-line summary of each activity for the day.



Appointment Book ATD Screen

The entry on each line is made up of three components, each separated by a dash. These components are; 1) a code representing the activity (rr= road ride, trk = track training, mace = road race, etc.), 2) duration of the activity in hours, and 3) the number of kilometers ridden. In the screen above, 10:00a TRK-1-30 indicates that while track training for 1 hour I rode 30 kilometers.

I can press F6 to attach a note to each entry, further describing my workout or race. The note portion of the entry may contain a number of different things, including:

1. A description of what was done that day, and the conditions it was accomplished under.
2. A description of what I learned that day. For example, I might record what strengths I saw in a competitor that day that might threaten me in a future race. This way, when I prepare strategy for a future race, I can press F7 (Find) to query for a particular person's name. Then I press F6 (Note) to read the entry.
3. An inspirational note that might help me psyche up and prepare for an event. (I put an asterisk (*) before such notes to make them easy to find.)
4. My split times from interval training for the day. I also include the weather conditions, gears used, etc. This helps to compare times from session to session and to my personal best.
5. Positive feedback I received and the initials of the person who said it. Remembering all the comments really helps with motivation through the dull times.
6. Heart Rate information such as: Resting heart rate, maximum heart rate during high intensity training, average heart rate during a specific endurance workout, etc..

The one line APPT entry is used for quantitative analysis, while the note portion attached to each entry is used for qualitative analysis and to search on. All that is needed now is to summarize and present this information.

Using Lotus in Training and as Team Accountant

During the season I'm tired and impatient, so getting useful information in an easy way is important to me. I print my Appointment Book file to DIARY.TXT, a file without notes or many days per page. Then in Lotus, I generate a complete report by calling up ABKRPT.WK1, a worksheet I have developed. I activate a special Lotus macro in the worksheet, which pulls DIARY.TXT into the Lotus worksheet and changes the data into a format that is useful to Lotus.

I have so far developed three additional worksheets that generate useful summaries of my training. These are:

1. An hourly summary report and graph HOURSM.WK1.
2. A kilometer summary report and graph KMSUM.WK1.
3. A trend line graph depicting the degree of over training as measured by heart rates TTT.WK1.

The Hourly Summary Report shows the daily, weekly, monthly and year to date hours of activity. By pressing F10, a nicely formatted and labeled bar chart portrays the volume of work trend.

Training Hours By Week Chart

I also do a Kilometer Summary Report that produces a stack bar chart similar to the hourly chart. In addition, it shows the intensity of the work volumn.

Find it on The HP Palmtop Paper ON DISK, Nov/Dec 92.

Back Issues of The HP Palmtop Paper

While supplies last, you may purchase sets of back issues of *The HP Palmtop Paper* or *The HP Palmtop Paper ON DISK*. Use the enclosed order card or contact *Thaddeus Computing Inc*,

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The benefits of these analyses are threefold. First, I can try to correlate performance to training time or to training activity. Secondly, I can compare data, year to year, and adjust my training program accordingly. (For example, I can compare the total number of hours of weight training I did in Dec. of 1992 vs. Dec. of 1993.) Finally, the onset of over training can be better predicted (and thus avoided) by analyzing the third graph — the resting heart rate trend line.

There is one place where I use Lotus for data entry. I wear a heart rate monitor that stores my heart rates during training and racing. These heart rates allow me to quantify how hard my body is being pushed. After the activity I recall the data and manually input the figures into one of my Lotus templates (TTT-.WK1 💾). With the push of a button I see a nice line graph that I use to show my coaches.

Heart rate graph

The statistical calculations performed by the template include a frequency and cumulative frequency distribution. This will tell me the percentage of time I spent over my anaerobic threshold and therefore how much lactate I produced and tolerated. Knowing these and other variables is very important for determining the optimum training program and race strategy.

Finally, I use Lotus as our Team Accountant. After each event a Lotus template spreadsheet is used to record each rider's earnings. Then our team's winning payout formula is applied to calculate how much of his winnings he will keep and how much he will share with his teammates. This template also generates a pie chart of each rider's contribution, and shows who the "Free Riders" (non-contributors) are.

HP CALC

Another part of my automated diary is a set of HP CALC equations. Most of these equations are used for the timed cycling events such as Track and Time Trials. For example, if I know somebody has posted 50 minutes for a 40 K time trial I can quickly see what average speed I should be looking for during my race (I have a computer that tells me average speed on my bike).

I use another equation in Track Cycling to solve for either finishing time or lap time. I then link the variables of this equation to another to calculate the average speed for this race. For example, if I want to do a 5 minute pursuit (4K), I enter this amount in for Time and hit space on Lap and see I need to do each lap in 29.7 seconds. Then I go to my Average Speed equation and see I need to be doing 48 K/hr after the start. Now I can pace my self two ways.

Since Track Bikes are limited to a single gear I use another equation to pick the best one.

PHONE

I use phone as a spare parts data base. I can keep an inventory of what equipment I have and how much each costs and where I acquired each piece.

COMM

I can use the built-in communications program to call the computer of our local newspaper with our Team's race results while we are away. This provides sponsors wider exposure.

Money Manager

My sponsors require a Profit and Loss (Winning and Expense) Report for each sponsored event that I attend. I use Money Manager to track winnings and expenses by setting up a "Project" for each event. I can then demonstrate the power of the palmtop by easily generating reports on demand. (See page 42 of the Fall '91 issue, and ad on page 19 of this issue for more on Money Manager.)

Personal Food Analyst

PFA not only provides tremendous insight into the foods I am (and should be) eating, it's easy to use. The program is customizable to user needs and graphically and numerically shows where you are with respect to your daily and weekly nutritional goals. After using the program I was astonished with how much fat is in my diet — I thought I was eating well. My protein consumption was also far below what it should be, as was my fiber intake. PFA's analysis showed that I was OK with Iron, which is important for an athlete's ability to transport oxygen in the blood. When I show people my 95LX, this particular program is a major attention getter.

I understand that the next version of Personal Food Analyst will be system compliant, which will make it even easier to use. (See page 41, Jul/Aug 92 and ad on page 31 of this issue for more on PFA.)

Conclusion

The above description of my ATD is another excellent example of how the 95LX's features and programs can be combined in extraordinary ways.

As you can imagine, not too many cyclists are aware of pocket computers. I always catch people's attention when I update my diary. When they ask me what I am doing, I first show them the speed and ease of the instant graphing and reports. The conversation quickly goes to what games I play on it and what interesting sounds I get my 95LX to make. Arnie's "I'll be back" which I play using SoundPlay 💾 is always a great hit.

I am enjoying using my 95LX and the ever-growing benefits it gives me.

💾 *Find it on The HP Palmtop Paper ON DISK, Sep/Oct 92. TTT.WK1 on the Nov/Dec 92 ON DISK.*

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Data Exchange *is the first palmtop product that gives the HP 95LX user seamless connectivity with the Macintosh. File transfer (both ASCII and binary files) between the HP 95LX and the Macintosh is quick and easy. Specifically designed to be HP 95LX system manager compliant, DataExchange can be accessed without exiting or halting other programs or built-in applications. DataExchange also translates personal information manager data between the 95LX and several popular Macintosh programs such as PowerUp AddressBook Plus and Claris Hypercard.*

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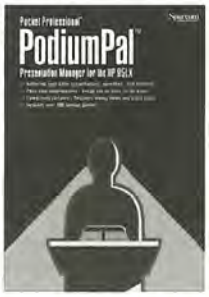
PodiumPal*, the confidence building, presentation program for the beginner or professional speaker, helps you create, organize, time and deliver your presentations. Generate up to 12 "notecards" of titles and body text per speech. A large screen-font makes it easy to read the information during presentations and a built-in clock with blinking cursor keeps the presentation on schedule. A warning is flashed prompting the speaker to begin the wrap-up.*



Speaking of Fun.

Five of the world's best board games to challenge the palmtop user: Chess, Checkers, Backgammon, Space Invaders and Tetris. Games95 offers hints for the next move and sides can be swapped – especially if the computer is winning.

Power and Performance. Battery-backed Ram Cards.

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Swift!

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Help! Choosing a Product of the Year Isn't Easy.

We'll nominate 95Buddy, SWITCH! 2.0, the ACE! Double Card as contenders, but which products do you think are the best? While you're thinking, take a look at Sokoban, Games95, the spell checker and graphics generator mentioned later in this article.

By Hal Goldstein

Products of the year

Innovation spawns innovation. The HP 95LX Palmtop PC has spawned a mini-industry. Page through this issue and be astounded at the creativity of vendors who have developed solutions to make the HP 95LX even more useful then it already is.

What about a "product of the year"? When you combine all the freeware and shareware software with commercial hardware and software there are more than five hundred products to choose from. "Objectively" choosing the best products would be a difficult task.

Instead I will begin a discussion. If you have a product that you cannot live without, please write in. We will publish your responses in the next few issues. Perhaps towards the end of 1993 we will ask for submissions as to your vote for product of the year, 1993.

Many hardware and software candidates come to mind as possible "products of the year". I'll start our discussion with three utilities that extend and expand on the 95LX's built-in capabilities.

95Buddy

As we were putting this issue to bed, I received the latest version of 95Buddy (reviewed on page 6 of the July/August 92 issue, update information, page 18 this issue). Awesome! I have just played with it for a few minutes. There are over 100 new features to make your life with the HP 95LX easier. 95Buddy is designed to let users of the HP 95LX built-in software accomplish more with fewer, more intuitive keystrokes. Here are just a few example:

- You can time/date stamp your MEMO, PHONE file, or APPT note by pressing CTRL-B.
- Press MENU-U to save (update) your MEMO, 1-2-3, APPT, PHONE, or HP CALC file.
- Pressing ((produces a ":", pressing)) produces a "\", and pressing == makes a "_": No more pressing <Shift> 5 for a ":".
- In Filer type **t** and you will move to the first file beginning with a "t". If it's TALK.TXT, press ENTER twice to edit it in MEMO.
- In FILER, pressing **(** is the same as pressing F5 **A:** (goto the A: drive) and pressing **)** is the same as pressing F5 **C:** (goto the C: drive.) Press a comma to launch DOS.
- A find and replace feature as well as repeat last edit are added to MEMO, APPT, and PHONE.
- You can rename the "Name", "Number" and "Address" field names in PHONE.

The list of 95Buddy features goes on, and on, and on, and on.

The documentation in the new 95Buddy is complete and easy to use.

[Jeffrey Mattox gives a list of 95LX bugs in the next issue — Rich.]

SWITCH!

My second nomination is SWITCH! 2.0. SWITCH! has been well-chronicled in this issue (pages 25 and 52) and in the July/August 92 issue, page 8. Allowing a host of new programs to work fully in conjunction with the built-in applications is a gigantic achievement. One new feature of SWITCH! I can't live without: The ability to run DOS programs without exiting built-in applications.

ACE! DoubleCard

Finally, and perhaps the most important new utility is the ACE double-card software (see review in the September/October 92 issue, page 17 and the ad in this issue, inside front cover). This custom version of Stacker for the HP 95LX makes data compression invisible to the user. Put double-card software on your RAM disk or built-in C drive and you double the amount of disk space available. Real estate is precious and expensive on the HP 95LX. Double card software is a cost-effective way to increase that disk space for your files.

I look forward to your recommendations of indispensable products.

Games Revisited

In the Jan/Feb 1992 issue we devoted quite a bit of space to games including hidden built-in Hearts and Bones as well freeware and shareware games. Here is a brief update on the games front.

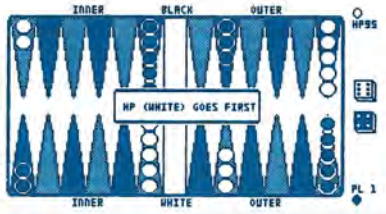
Sokoban has emerged as one popular free game for those long hours in airports. (If you're a bit compulsive you might avoid this game of logic as it could cost you

Find it on The HP Palmtop Paper ON DISK, Nov/Dec 92.

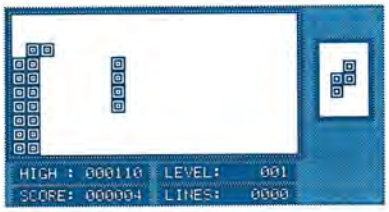
many hours. And yes, each maze has a solution.) Sokoban consists of a series of some 85 mazes, each a separate puzzle. The idea is to push objects through a maze until they are all in the dump. As you may have guessed, this isn't always easy: You can only push; you can only move one object; the maze doesn't give you much room to manoeuvre; other objects tend to act as movable walls. Sokaban can be found on Internet, CompuServe HandHeld forum, and *The HP Palmtop Paper ON DISK.*

Sample Sokoban Maze

Games95: Chess Screen



Games95: Backgammon Screen



Games95: Horizonal Tetris Screen

Sparcom, with their new **Games95**, has come up with a coup of sorts – some classic games incredibly well-implemented on the HP 95LX. The user interface and graphics are outstanding and the computer in most cases does a reasonably good job holding its own in competition.

Games95 includes Chess, Checkers, Backgammon, Space Invaders, and Tetris.

All the games but Tetris are written by Andrew Glaister. Yann Rousse has enhanced the same version of Tetris that appeared on the free 1992 Subscribers Disk to include a horizontal as well as a vertical board.

If you are a game enthusiast, you should also consider the ACE GAMEcard VOLUME 1. The card includes Tetris, Blackjack, Craps, Adventure, Reversi, Go, Poker, and more (14 games on a ROM card). Many of these games are written by contributing editor Ed Keefe. Installation and access is simple. Put GAMEcard in the 95LX card slot, press [ALT]-[MENU], and up pops an ICON-filled screen written by Dave Goodman.

ACE GameCard Opening Screen

Move the cursor to your program (for example, the dice are craps) press [ENTER] and you start playing.

Worth Mentioning

A spell-checker and a graphics generator have surfaced. Physician and contributing editor Robert S. Williams not only found the Sokoban game, but located two other programs of interest. SPEL95.ZIP is freeware and the first spelling-checker alternative to HP's Dictionary/Thesaurus card that works with MEMO. It is good for catching typos. This is a unique TSR spell-checker that works on the 95LX. You load the program at boot-up and it occupies 60K of system RAM. Then it is activated by pressing [CTRL] three times. (the program beeps when activated). After that, as you type, each time [<Spacebar>] or [ENTER] is pressed the word to the left is checked. If the program recognizes the word, nothing happens. If the program does not, then it beeps. To deactivate, press [CTRL] three times.

According to Robert, GRAPHI.ZIP is the best 95LX graphics drawing/viewing package. It can import .PCX graphics files, draw circles and rectangles automatically, allow single pixel drawing, and create lines and fills shapes automatically. The author asks a $5 shareware contribution.

Find it on The HP Palmtop Paper ON DISK, Nov/Dec 92, Also available on Internet and CompuServe.

Contact Information

95Buddy – $40 (Shareware)
95Buddy is available on *The HP Palmtop Paper ON DISK*, in *Library #7 of CompuServe's HPHAND forum.* or directly from the author (add $5 shipping): *Jeffrey Mattox, P.O. Box 45282, Madison, WI 53744-5282, USA.*

DoubleCard – varies
1-4 MB RAM memory cards available from *ACE Technologies, Inc., 2880 Zanker Road, Suite 103, San Jose, CA 95134, USA; Phone: 800-825-9977 or 408-428-9722; Fax: 408-428-9721.*

GAMEcard - $79
Available from *ACE Technologies (see above contact information).*

Games95 – $49.95
Available from *Sparcom Corporation, 897 NW Grant Ave., Corvallis, OR 97330, USA; Phone 800-827-8416 or 503-757-8416; Fax: 503-753-7821; CompuServe ID: [75320, 2440].*

GRAPHI – $5 (Shareware)
Available on *The HP Palmtop Paper ON DISK, Nov/Dec 92.*

SOKOBAN – freeware
Available on *The HP Palmtop Paper ON DISK, Nov/Dec 92.*

SPEL95 – freeware
Available on *The HP Palmtop Paper ON DISK, Nov/Dec 92.*

SWITCH! – $69
Available from ACE Technologies, see above contact.

PHONE "Cut and Paste" Database Saves Time and Effort!

This user has turned PHONE into a catch-all database that helps him keep track of documents, and lets him cut and paste useful information to MEMO and APPT.

By Ronald Vieceli

Many of the "problems" with the 95LX's built-in applications don't have a thing to do with hardware or software. They result from our own limited view of what we think the applications should accomplish. This article outlines some different ways to look at Phone Book and how it relates to the other built-in applications. I hope it will give you some ideas you can use to make the 95LX better meet your needs.

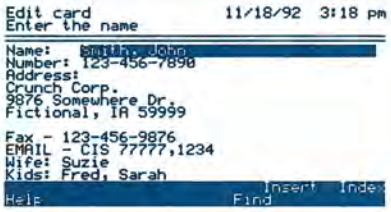
The first thing we have to do is look at all of the applications in terms of what they really do and how they integrate with the overall system. I think one of the BIG stumbling blocks with the Phone Book is its name. If it was called DATABASE, and if the Name, Number, and Address fields were called FIELD1, FIELD2 and NOTES, users would have a much more open view of what it was for.

It's true that Phone Book is different from other databases. It has fewer fields, they can't be renamed or rearranged, and you can't change their length. So what! Instead of focusing on the fact that it doesn't work like a regular database, focus on how you can use PHONE along with the other built-in applications to accomplish what you want.

Creating a "Cut and Paste" Database

Remember that the built-in applications are an integrated system supporting each other. For one thing, the 95LX can easily exchange information through its clipboard. This makes it possible to take address information from PHONE and drop it into a MEMO letter. A normal PHONE entry has the last name, first name in the first field, phone number in the second, and address in the third.

I put additional records for the same name in the Phone Book in a form that is more useable when cut and pasted into the other applications. So, for example, the first entry for "John Smith" would be in the normal form, like this:



Phone Book Record, Normal Entry

I also put EMail ID's, fax numbers, and other information in the Address field. I could then make a second record, with name, address, and salutation set up as shown below.

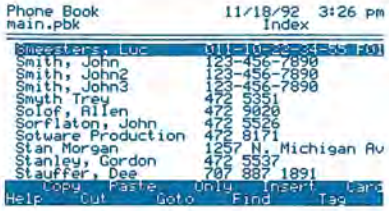
Phone Book Record, Additional Entry

If I want to write a letter to John Smith, I'll open a blank MEMO screen, go to PHONE and highlight John Smith (not Smith, John), press [F2] to copy the information to the clipboard, go back to MEMO and press [F4] to paste it into MEMO.

I'll make additional entries for the same person in PHONE, if I run out of room. I create additional records with the same name followed by a number (1,2,3, etc.) to keep things organized. So, for example, if the first entry was **Smith, John**, the second entry would be **Smith, John2**, the third, **Smith, John3**, etc. The sorting feature of the Phone Book will keep these records together and in the numbered order. They would look like this on my main Phone Book screen (see graphic, next page):

ABOUT THE AUTHOR

[Ron Vieceli lives in Carbondale, Illinois, with his wife Betsy and two children; Katie (13) and Charlie (6). Ron is a representative for VALIC (The Variable Annuity Life Insurance Company), which specializes in providing retirement plans to educators and the health care industry. Ron uses his 95LX to keep track of appointments, communicating with the office, and keeping client information in a 1-2-3 database. Contact RON on CompuServe [73310,3663] or MCI MAIL RVIECELI MCI ID: 336-3692.]


Phone Book 11/18/92 3:26 pm
main.pbk Index
Smeesters, Luc 011-10-22-34-55 F01
Smith, John 123-456-7890
Smith, John2 123-456-7890
Smith, John3 123-456-7890
Smyth Trey 472 5351
Solof, Allen 472 9020
Sorflaton, John 472 5526
Sotware Production 472 8171
Stan Morgan 1257 N. Michigan Av
Stanley, Gordon 472 5537
Stauffer, Dee 707 887 1891
Copy Paste Only Insert Card
Help Cut Goto Find Tag

Phone Book Sorting Multiple Entries

I can highlight the first entry and press [ENTER] to view the entire contents of the card. With the first Smith, John open, I can view the contents of the additional entries by pressing [<PG UP>] and [<PG DN>].

I can create a new Phone Book card by cutting and pasting information from MEMO. For example, I can copy name, address, and salutation information from the beginning of a MEMO letter and paste the information into PHONE. I press [F9] to begin Marking the text, use my ArrowKeys to highlight the desired information, and press [F2] to copy the text to the clipboard. I then switch back to PHONE and press [F4] to paste the information into a new card. The information will appear in the new card, line for line, as it appeared in MEMO. The first line will be copied to the Name field, the second line to the Phone field, and subsequent lines (maximum of 8, including blank lines) to the address field. The first two lines can be no longer than 30 characters and the others no longer than 39. You must end each line by pressing [ENTER].

The Phone Book record I create in this manner can be copied and pasted to MEMO the next time I write a letter to the same person. I also use the Phone Book to store addresses to print on the envelopes. These records are in all caps (to conform to the new postal rules) and end with a formfeed character ([CTRL]-L) to eject the envelope from the printer.

Finding Things In This "Cut and Paste" Database

Creating all these different kinds of Phone Book entries does give the main Phone Book screen a ragged and disorganized appearance. There are no more neat rows of names and numbers. Fortunately, PHONE's search features make it easy to find things. For example, press [F6] and type in **can** and you'll get every record that has "can" in any field, including Canada, canvas, and toucan. You can put unique codes in with the PHONE entries to help you organize and find records. For example, you might put @@ in client's records to distinguish them from personal friends. Then all you would have to do is press [F6] @@ [ENTER] to get a subset of your Phone Book with only clients displayed.

Copying from Phone to Appointment Book

You can also copy and paste from PHONE to APPT. Go to the main screen in PHONE and highlight the record you want to copy. Press [F2], switch to APPT and highlight the desired blank timeslot and press [F4]. This pastes the contents of the Name field from PHONE into the selected APPT timeslot. With the APPT time slot still highlighted, press [F6] to go to the Note screen. Press [F4] again and the entire record from PHONE will be placed in the appointment note. The entire PHONE record will always fit into an APPT note. You now have the pertinent information available without looking for it.

Document Management with Phone Book

I use my 95LX to create most of my correspondence and reports. I write memos and letters while I am waiting to see an appointment. I then print them or send them out Email. I keep backups of the files on my PC in case I need to refer back to them later, and delete the originals on the 95LX to free up memory. Unfortunately, this procedure leaves me with

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Copying and pasting to the Phone Book.

1. Up to ten lines can be pasted to a phone record. The first two lines can contain up to 30 characters. The remaining eight lines can contain up to 39 characters. All lines must end in a carriage return. Lines that are wrapped by an application will not paste properly.

2. The first line must contain at least one character in addition to the carriage return. Lines after the first can contain only carriage returns and will paste as blank lines.

3. Control characters that the 95LX supports can be included in the text, i.e. formfeeds ([CTRL]-L).

Copying and pasting from the Phone Book to other built-in applications.

1. The Phone Book supports 30 characters in the name line. Pasting to an appointment slot will truncate the text after 27 characters.

2. Only the name line will be pasted into the appointment slot.

3. An entire Phone Book card can fit into the note space of an appointment.

4. Records from Phone Book will overwrite text in an appointment slot if you paste to an "occupied" slot.

5. Text from Phone Book is always entered as a label when you paste to Lotus 1-2-3. Even if it is a number.

6. The 95LX always inserts a carriage return at the end of the line in the Name: and the Number: lines when you paste from the Phone Book (even if the number line is blank). You must enter carriage returns manually in the Address: field to paste them to another application.

a backup directory filled with lots of short files with generally undecipherable names. I use the following approach to help me keep track of where a file is and what it has in it.

I have a separate Phone Book called FILES. When I finish a note or letter in MEMO, I press [CTRL]-[HOME] to go to the top of the document. I type the path and filename on the first line and press [ENTER]. On the second line I type a key word to aid in searches and press [ENTER]. (Use *MEMO, *LETTER, *DOC, etc.. The asterisk "*" makes searches more exclusive.) I use the last eight lines to enter a description of the file. Each line can be up to 39 characters long and must end with a carriage return (press [ENTER]). The line cannot automatically wrap to the next line or the information beyond the automatic wrap will not transfer to PHONE.

Next I copy this information to my Phone Book. I press [F9] (Mark), use the ArrowKeys to highlight the desired text (the ten lines or less just entered), and press [F2] to copy the information to the clipboard. I then open the FILES Phone Book and press [F4] to Paste the ten lines into a new entry.

I can search the FILES Phone Book by keywords or a description of the file and find out what the filename is.

PHONE: A Simple, Flexible Database

The most basic way to look at PHONE is to view each card as a record consisting of ten fields (each line a separate field). The first two lines are 30 characters long. The remaining eight in the address section are 39 characters long and must end in a carriage return to keep them separate. If you enter information in a consistent manner you can then keep the field information straight and use the Copy and Paste features to put the data in other applications.

For its limitations, PHONE is a remarkably flexible database. You can use it to store bits and scraps of all sorts of information, including addresses, MEMO headers, EMail addresses, or anything else you might want to lift out of the Phone Book and paste into another application. Using the Phone Book for these functions will speed your projects on the 95LX and save you keystrokes. Your Phone Book becomes like the "junk drawer" in your kitchen that you throw all your odds and ends into. The big difference is that PHONE's search features make the odd bits of information easy to find!

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Lotus 1-2-3 Advice -- from My Optometrist?

Tom sees his eye doctor's advice in terms of Lotus 1-2-3, and gives three excellent tips for developing spreadsheets.

By Thomas Page

Readers of the last issue know that I am experiencing some problems with my eyesight. My vision has improved since I wrote the last column, but is still severely impaired. On a recent visit to an optometrist, I got some pointed advice about my visual problem, which leads to some interesting insights about using the 95LX.

Adapt to Your Circumstances

The conversation with the optometrist began like this:

Dr: "From how far away do you watch television?"
Me: "It's across the room."
Dr: "Could you see it better if you were closer?"
Me: "Yes?"
Dr: "Why don't you get closer?"

It's pretty obvious advice for someone with poor eyesight, and the general principle, adapting to the circumstances of your situation, is pretty good advice for HP 95LX users. A Palmtop is not as powerful as a desktop computer. Smaller and more limited versions of programs, including 1-2-3 spreadsheets, may be more appropriate for use on the 95LX. Even alternate forms of analysis may be appropriate (see pages 30-31 of the July/August issue).

Don't Base Your Actions on Incorrect Assumptions

The conversation continued:

Dr: "Bright light bother you?"
Me: "No."
Dr: "Then why do you own a pair of prescription sunglasses?"

I assumed that I needed sunglasses – I didn't. When writing computer programs, or designing Lotus worksheets, a common and potentially erroneous assumption is that a certain value is constant. One of "Murphy's Laws" for computer programmers is: "Constants aren't". As soon as you put a constant into a program (or spreadsheet) you discover that the value needs to be able to change and you really should have put in a variable. A good programmer, spreadsheet designer, or analyst of any kind will check the validity of his or her assumptions by varying all the elements of the equation. It helps to show the effects of changing the underlying assumptions, and can help to define the critical variables in a problem.

Likewise, it is a fact that computer analysis may not produce a definitive result. Assumptions may be wrong, and different forms of analyzing a problem may produce very different results.

Test the Results to See if They Are Reasonable

The optometrist tested my eyes with a standard eye chart:

Dr: "Read line three from the left, there are no numbers on the chart."
Me: "M, L, R, 8, ... "
Dr: "I said there were no numbers!"

This is a straightforward example of a simple principle: Test your results to see if they are reasonable.

I once worked with a person who so distrusted machine-generated documents that he was accused of proofreading Xerox copies. This person, a computer programmer, knew that there is almost a 100% probability of errors creeping into complex computer routines. He also knew that the best way to catch errors is to verify the results of complex analyses and even simple calculations.

Verifying results is applicable on a much wider scope than computer analysis. For example, an accountant would never think of doing a spreadsheet without "cross footing" it to verify accuracy. Cross footing is the process of comparing the sum of row totals and column totals – they should be equal.

The accountant's advice can be incorporated into a computer program or spreadsheet. It's tough to stop someone (including yourself) from inputing a bad value into a spreadsheet. But it is easy to write a formula to display "ERR" if an unacceptable value is input into a cell. Consider the following formula evaluating input in a cell range named "OBJECT" to determine if the input is

ABOUT THE AUTHOR

Tom works for a natural gas pipeline company in Houston, Texas, and was one of the first to use PC's in the natural gas industry. He has been a regular contributor to support publications of Hewlett-Packard computers for many years. Tom's CompuServe ID# is [76011, 3655].

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in the range of acceptable values defined by cells "HIGH" and "LOW".

```
@IF(OBJECT>=LOW#and#OBJECT<
=HIGH,0,@ERR)
```

A range of acceptable values may be "static" (hard coded into the spreadsheet), or "dynamic" (computed within the spreadsheet). The accountant's cross foot is a dynamic range in that the sum of rows must equal the sum of columns, which can change.

This results check can be fouled by one of the perversities of computers unless it is designed with a small amount of tolerance. Computers "think" using binary numbers, but display results and receive input in decimal numbers (the preferred human number system). A decimal fraction often cannot be converted to binary number without some slight error. The result is that two numbers that should be equal may vary slightly because the underlying numbers have slightly different conversion errors. Testing for equality results in identifying an error when, in fact, one does not exist. The formula below provides a bit of tolerance and uses the @ABS function to allow for plus and minus 0.001 variation.

```
@IF(@ABS(@SUM(ROW)-@SUM(COL))
<0.001,0,@ERR)
```

The cross foot is an example of verification where you test for equality in two different calculations. However, sometimes you can take a shortcut and test for approximate equality. For example, you know the sum of a row needs to be within a certain range, or the average of the numbers in a row will be within specified fixed variance. Application of shortcut calculations requires knowledge of the system being analyzed and some foresight.

One might wonder why a well-tested spreadsheet should contain a lot of error checks. The answer is simple: How else do you get a well checked spreadsheet? Writing error tests during development is the best way to assure good logic. In addition, error tests protect you from accidentally pressing the wrong key and turning a formula into a constant (i.e. 1-2-3 "sees" text entered into a cell as a label and evaluates it as zero).

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WordPerfect 4.2: MEMO Alternative for the 95LX

Looking for something more robust than MEMO? This older version of WordPerfect sports a spell checker and thesaurus! This article covers installation and work arounds for features that don't work on the 95LX.

By Gerald B. Curtis

[Thanks to Marty Mankins of WordPerfect Corporation for his feedback on, and additions to this article – Rich.]

I read in *The HP Palmtop Paper* (page 23, Jan/Feb 92 issue) that someone had found that WordPerfect 4.2 works satisfactorily on the 95LX. However, I had some trouble installing the program, and it took some time and experimentation before I had it working properly.

Installing and Setting up WordPerfect 4.2 on the 95LX

Although you may be able to make WP 4.2 fit on the 95LX's C drive, it's probably better to install the software on a RAM card. Run WP 4.2 on your desktop with its setup option (described in the next paragraph) and then use the connectivity kit to transfer the necessary WP 4.2 files to a RAM memory card. The only file you really need is WP.EXE, the main program file (272,946 bytes). The setup procedure will create another small file (|WP|SYS.FIL) that you should also transfer over to your 95LX. If you have room on your RAM card, you can also install the WordPerfect spelling checker (LEX.WP – 289,460 bytes), the thesaurus (TH.WP – 362,288 bytes), and one or more printer files (name and size varies).

You can set up WordPerfect 4.2 by starting it from the HP 95LX DOS prompt using the **wp/s** command. It's easier to do this on a PC and then transfer WP.EXE and |WP|SYS.FIL over to the 95LX using the connectivity kit. When you use **wp/s** to start WordPerfect, it comes up with a small help screen. Press [ENTER] to move to the set-up options and choose **3** to "Set Screen and Beep Options." Set the number of rows to 16. Leave the columns at 80 (don't set columns to 40, it screws up the screen display). Keep pressing [ENTER] to accept the rest of the options. Back at the options screen, you need to press 0 to enter WP and save the changes.

This sets you up for 16 rows, which puts the bottom of the screen where it should be. However, the right side of the screen is still 80 columns over, and as you type along, the screen will creep over as you move beyond the right edge. You can use the [ALT]-Arrow keys to move over to parts of the screen that are not visible. [ALT]-[<Shift>] plus the left or right arrow keys bump the screen 40 columns to the left or right.

In order to simulate a 40-column screen when working on a document, I set the margins to L=1, R=40. I no longer have to use the [ALT]-Arrow Key combinations to move to the part of the document beyond the right edge of the screen. When I'm ready to print a document, or if I import it to my desktop PC, I can reset the margins to an 80 column format.

Features That Don't Work on the 95LX, and Work Arounds

Minus/Plus Keys and Hyphen

At least two WordPerfect 4.2 keys and one operation do not function properly on the 95LX. The Minus Key (-) on the 95LX keypad does not produce a minus in WordPerfect, it scrolls the document screen back. The Plus key produces a forward scrolling action instead of a plus sign. In addition, pressing [CTRL]-[<Backspace>] doesn't delete a word, and bolded or italicized words don't show up on the display (while underlined words do). A dash appears properly when automatic hyphenation is performed.

ABOUT THE AUTHOR

Gerald B. Curtis is President of Gerald B. Curtis Associates, a nationwide roofing design and failure investigation firm based in Camden, New Jersey. Mr. Curtis has been using computers since the early '80s and an HP 95LX for about a year. He says that the use of the HP 95LX has improved his business operations and timely communication tenfold. He lives in Haddonfield, New Jersey, a suburb of Philadelphia, with his wife and three children.

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A hyphen is manually produced on a standard PC keyboard by pressing the minus key found next to the zero in the top row of numbers. The reason the "normal" hyphen cannot be produced by direct keystroke on the 95LX is that there is no top row of numbers with a minus key.

However, a minus or manual hyphen can be produced by pressing [ALT]-43 on the 95LX and a plus by pressing [ALT]-45. Of course you could make a WordPerfect macro to create this, or any of the keys mentioned above.

Many other characters can be assigned to an ALT or CTRL key using WordPerfect ALT/CTRL key redefinition function (press [CTRL] [F3] 3). But choose your redefinitions carefully. Some CTRL key combinations are already reserved by WordPerfect to perform other tasks. The "-" and the "+" cannot be assigned within WordPerfect in this manner because their ASCII values of 043 and 045 respectively are not within the range of values allowed for key redefinition. The HP 95LX User Defined CHAR keys do not work in WordPerfect 4.2.

Word/Line Deletion

Even though the word deletion function ([CTRL]-[<Backspace>]) does not work on the HP 95LX, there is a simple work-around using a WordPerfect macro.

1. Create the macro on a PC running WordPerfect 4.2 by pressing [CTRL]-[F10].
2. Enter a macro name when prompted. I used ALTP.MAC. The .MAC extension is recognized by WordPerfect as a macro file. ALTP means that you press [ALT]-P to activate the macro in WordPerfect 4.2. I chose "P" in ALT P because it is directly below the backspace key and far enough away from the ALT key that I don't trip over my fingers when trying to press the two keys.
3. Type in [CTRL]-[<Backspace>] as the contents of the macro.
4. Copy the macro (ALTP.MAC) back to the 95LX, into the same directory that has WP.EXE.
5. To delete a word in a document, place the cursor on the blank space before it, or anywhere in the word, and press [ALT]-P.

One important point about restoring deletions made with the new [ALT]-P macro. When you delete using [CTRL]-[<Backspace>] on a PC three consecutive times to delete three words, you can restore all three words by pressing Restore ([F1] 1). However, if you used the [ALT]-P macro on the 95LX to delete three words, pressing [F1] 1 would only restore the last word deleted. If you press [F1] 2 you are shown the 2nd to the last word deleted and given the opportunity to press 1 to restore it, or to press 2 to be shown the 3rd to the last deletion.

When WordPerfect is running on a PC, pressing [CTRL]-[END] deletes the rest of a line beyond where the cursor is. Because the 95LX's END key is a Shifted RightArrow, you have to first press [<Shift>] and then hold down [CTRL] and press [<RightArrow>]. (NOTE: Pressing [CTRL] and then [<Shift>]-[<RightArrow>] does not work

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for some reason.) The STICK.COM utility makes [ALT] and [CTRL] "sticky", which means that you can press them and let go instead of holding them down. Using STICK.COM in conjunction with WP 4.2 makes using [CTRL]- and [ALT]-key combinations easier to use on the 95LX.

Viewing Bolded or Italicized Words

When you bold or italicize a word in WordPerfect, the codes show up in the Reveal Codes screen, but the word(s) do not appear bolded or italicized on the 95LX's screen. I bracket these words with a rarely used character (such as ■, created on the 95LX by pressing [CHAR] **B**) to make them easier to see. When it comes time to print the document or to transfer it to a PC, I remove all of the ■ with a special macro (ALTB-.MAC).

Using WP 4.2's Spell Checker

Using WordPerfect 4.2's Spell Checker or Thesaurus requires patience and care due to the display discrepancies. However, I think the extra effort is minor compared to the fact that the speed and thoroughness of those utilities exceeds anything available for the 95LX.

When WordPerfect comes to a word it's spell checker doesn't recognize, it highlights the word and displays spell checker options at the bottom of the screen. If you have your right margin set wider than 40, and the highlighted word is beyond the 40th column, it flashes on the screen for only a moment before the screen moves back to the left. You can press the [ALT]-[<Shift>]-[<Left Arrow>] or the [ALT]-[<Shift>]-[<Right Arrow>] to move the screen to the left or right so you can see the highlighted word.

The 16-row set up also impacts the way WP 4.2's spell checker displays alternate words. If WordPerfect is spell checking a document and comes to a word it thinks is misspelled, it displays a list of possible correctly spelled alternative words at the bottom of the screen. When WordPerfect is set up for 16 row display, WP 4.2 will only display one line of three possible replacements words, even if there are more possibilities. Press [ENTER] to toggle through the other possible replacement words. When you see the correctly spelled word, type the letter that is next to the word (A,B, or C) and that word will replace the one in the text.

Some Final Tips

Because of the limited RAM disk storage available on the 95LX, an error message may pop up advising you that there is insufficient memory on the drive where WordPerfect's temporary files are stored. The message and any difficulty can be avoided by invoking WordPerfect's WP-.EXE with another special software switch properly used. For example, if you want to place the temporary files in a sub-directory named **a:\wp\ temp**, that you know will *always* have sufficient room available, you can do so by using the following Word Perfect start up command and switches: **wp/d-a:\wp\temp**.

I have created 95LTRHD, a header file that I temporarily put at the beginning of all my documents to help me remember all the ASCII [ALT] commands and macros I have created in WordPerfect. When I'm finished with the document, I delete the header and save or print the file.

WordPerfect 5.1 vs 4.2; Other Final Comments

I use WordPerfect 4.2, instead of 5.1 because its commands are simpler and more easily remembered, and because it's smaller and takes up less RAM disk space. It's probably possible to get 5.1 running on the 95LX loading the minimum files on a RAM card, and using the small .DRS file. Depending on the size of your RAM card, you may have to redirect the storage location of WP's temporary and document files to the 95LX's C drive.

You can transfer the WP 4.2 help file over to your 95LX, but that will cost you another 57,135 bytes of storage space, which I advise against. It's better to know WP 4.2's most important commands by heart. I have, however, taken the trouble to add a narrow strip of self adhesive tape covered with clear plastic adhesive tape on which I have written the F1 - F10 Function Key prompts.

Find it on The HP Palmtop Paper ON DISK,

ALTP.MAC, ALTB.MAC, and 95LTRHD on the Nov/ Dec 92 issue of the Palmtop Paper ON DISK.

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Getting Help for Your HP Palmtop on CompuServe

The HP Forums on CompuServe offer technical assistance with a twist. This article is an update on the information you can find in the forums, how to join CompuServe, how to find the HP Forums, and basic strategies for getting the most for your money.

By Ted Dickens

What is CompuServe?

The CompuServe Information Service (CIS) is a public-access computer system that provides more than 1400 different information services. No matter what your personal or professional interests may be — there is something on CIS that you will find valuable.

In the personal computing area, CIS forums cover the full range of hardware, software, and even paperware (magazines). Besides the forums for HP, you'll find IBM, Apple, Microsoft, Lotus, Borland, Novell... All told, there are more than 200 computer companies active on CompuServe.

The forums are great places to get questions answered, keep up with the latest from HP and other vendors, get software updates, and tap into the wealth of public domain and shareware software. And unlike HP's support channels, the HP Forums are open 24 hours a day, seven days a week.

If you have used an electronic bulletin board system (BBS), most of the forum concepts will be familiar. Each forum has three main areas:

- Message boards, where you can read and write messages;
- Libraries, where you can find files;
- Conference rooms, where you can "meet" on-line with other users.

Communicate Back and Forth on Message Boards

Instead of one big message board, each forum is divided into sections; each section is devoted to a single topic. The sidebar that follows lists the sections in the HP Forums.

If you have a question about the Palmtop, post it in the appropriate 95LX section of the HP Handhelds Forum (**GO HPHAND**). No matter how arcane the question, the next time you log on, you'll probably find at least one answer.

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Costa Mesa, CA 92626

ABOUT THE AUTHOR

[Ted Dickens writes PC software for Niche Designs Corporation. He joined the CompuServe forums in 1984 and became the HP "Sysop (System Operator) in 1987. Ted's CompuServe ID # is [76701,272].]

reading the messages posted by others. It is a great way to learn about the 95LX because not only do you get answers to your questions – you'll get answers to questions that hadn't yet occurred to you. We all learn from our own mistakes; the HP forums can help you learn from the mistakes of others!

There are now five sections of interest to 95LX users:

- 95LX New Users – This is the place to start, whether you have just purchased a 95LX or are thinking about it.
- 95LX Datacomm – Get information on how to connect your 95LX to another system – whether your using the serial cable, modem, pager, cellular phone, packet radio, infrared interface, etc.
- 95LX Programmers – Enter the world of SYSMGR and learn from those who have written many of the applications you see advertised and discussed in *The HP Palmtop Paper*.
- 3rd party products – Companies like ACE Technologies and DataViz offer technical support here to help make the forum a more complete source of 95LX support.
- 95LX Users – All the rest of the 95LX-related topics are discussed here. It's a busy place!

Browse Through Libraries

Each section has a corresponding library where you can find application notes, product announcements, software upgrades, answers to frequently asked questions, public domain and shareware utilities, captured "threads" on interesting topics, and more. All told, about 90MB worth of information.

Each file is accompanied by a one line title, a paragraph or two of description, and a list of key words to help you decide which files are of interest to you.

The 400+ files for the 95LX include info on the 95LX hardware, an updated list of available software packages, games, and interesting graphic images that can be used as "top card" displays. The files in the 95LX New Users library should be in every 95LX owners bag of tricks. A short description of each file can be found on each issue's *HP Palmtop Paper ON DISK*.

"Talk" to Special Guests in Conference Rooms

Conferences offer you a chance to "talk" to special guests. Folks from the HP lab, support, and marketing groups have been guests. So have the leaders from PCMCIA – the group responsible for the RAM card standard used in the 95LX. Conference transcripts are kept and can be downloaded from the forum libraries.

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While that may sound steep, use the strategies that follow and your cost is less than a penny per message.

First, decide how you are going to use CIS. Do you just want answers to your questions, or do you want to keep up with what's going on in the field? If the former, you only need to log on when you have a question. For the latter, you will need to log on at least once a week. (Messages "scroll off" after a week.)

Second, choose your baud rate carefully. If you log on interactively, consider 300 baud. That's roughly 300 words per minute which most of us can read comfortably. Use faster rates only if you are going to be downloading files or using an automated access program. In fact, while you are learning to use CIS, 300-baud

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Accessing the HP Handhelds Forum

CompuServe offers a world of useful knowledge about your 95LX through the HP Systems Forum. If you have a CompuServe account, you can access the HP Handhelds Forum by typing GO HPHAND. If you don't have a CompuServe account, you can obtain a free Introductory Membership by calling 800-848-8199. Ask for representative #231. International users can call 614-457-0802 (USA) or one of the numbers listed below:

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HP Forum Section names

HP Handhelds Forum

1. General
2. Business calcs
3. Scientific calcs
4. Advanced handhelds
5. 95LX New Users
6. 95LX Datacomm
7. 95LX Users
8. 95LX Programmers
9. 3rd party products

HP Systems Forum

1. General
2. Mass Storage
3. Vectra
4. Vectra servers
5. HP110/HP150
6. Analytical
7. EtherTwist
9. Test & Measurement
10. NewWave
11. HP Dashboard
12. MPE Systems
13. HP-UX Systems
14. Other HP systems

HP Peripherals Forum

1. General
2. Network printers
3. LaserJet/LaserJet II
4. LaserJet III/4
5. DeskJet
6. PaintJet
7. ScanJet
8. FAX products
9. HPs for Apples
10. Other peripherals
11. 3rd party products
15. TWAIN

is ideal. The $15 usage credit in the introductory membership will pay for two hours of access at 300 baud – enough to learn your way around.

Third, be selective. In each forum you can select sections of interest. CIS will then only show you messages from those sections. Further, you can "scan headers" and only read "threads" that sound interesting.

Finally, use an automated access program. These programs are written just to access CIS and while they have different user interfaces, they share an underlying philosophy: Do it off-line. The programs log on, pick up the messages you want, then log off. You read and reply to the messages off-line, then the program logs back on and uploads the messages you have written. This can cut your CIS bill by 90%.

The automated programs were covered in more depth on pages 26-30 of the March/April 92 issue and pages 14-16 of the May/June 92 issue of *The HP Palmtop Paper*. Three of these programs, TAPCIS, ATO, and MESSAGE are shareware or freeware and are found on *The HP Palmtop Paper ON DISK*.

Summary

Whether you need an answer to a specific question or want to stay abreast of the latest information, the HP Forums on CompuServe offer something to every 95LX user. Joining is easy, and in no time at all you'll be a CIS veteran. While CIS is not free, use some simple strategies and get the most for your money.

Besides being a great source of information, the forums are fun. There are some real (non-ASCII) characters. While discussing why some 95LX's make faint clicking noises when running on batteries, we had some imaginative explanations – including "little green men who get in through the door on the card slot."

Try it out!

Find it on The HP Palmtop Paper ON DISK, TAPCIS and MESSAGE on the Mar/Apr 92 issue, ATO on the Fall 91 issue.

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Getting Lotus 1-2-3 and HP CALC to Work As a Team!

1 2 3

LOTUS

Ed demonstrates how the 95LX's CALCCELL function integrates Lotus 1-2-3 and HP CALC

By Ed Keefe

Integrating Lotus 1-2-3 and HP CALC

Let me describe a feature of the solve program that will make your life in the math lane much simpler. This technique ties together Lotus 1-2-3 and HP CALC's SOLVE function. Once you have seen this technique, you will be able to design interchangeable solution programs in SOLVE with one or two lines of code.

To show you how this technique works, I'll use INSURE.WK1, a simple 1-2-3 worksheet that compares the value of whole life vs. term insurance.

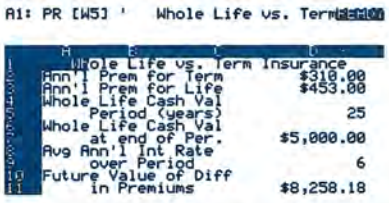
If you don't get *The HP Palmtop Paper ON DISK* and want to follow along on your 95LX, start 1-2-3 with a blank worksheet. Set column A to a width of 5 ([MENU] **W**orksheet **C**olumn **S**et-width **5** [ENTER]) and set the width of column D to 12.

Now key in the following worksheet labels and functions. (If you want to save a lot of keystroking, just key in the formulas in cells D11 and D13. The labels in column A are just reminders, anyway.)

Cell Contents

```
A1: '  Whole Life vs. Term Insurance
A2: 'Ann'l Prem for Term
A3: 'Ann'l Prem for Life
A4: 'Whole Life Cash Val
A5: '     Period (years)
A6: 'Whole Life Cash Val
A7: '     at end of Per.
A8: 'Avg Ann'l Int Rate
A9: '     over Period
A10: 'Future Value of Diff
A11: '    in Premiums
A12: 'Savings (+) Loss (-)
A13: '    with Term Ins
D11: @FV((D3-D2)/12,(D9/12)/100,D5*12)
D13: +D11-D7
```

When finished, your worksheet should look like this.


A1: PR [W5] ' Whole Life vs. Term Insurance
Whole Life vs. Term Insurance
Ann'l Prem for Term $310.00
Ann'l Prem for Life $453.00
Whole Life Cash Val
Period (years) 25
Whole Life Cash Val
at end of Per. $5,000.00
Avg Ann'l Int Rate
over Period 6
Future Value of Diff
in Premiums $8,258.18

Worksheet looks like this

Key in the numbers as shown below. If necessary, set the number of decimal places to 2 in cells D2, D3, D7, D11, and D13 (press [MENU] **R**ange **F**ormat **C**urrency **2** while in the cell. (This makes the numbers in those cells appear with currency formats.)

```
At Cell: Key in
   D2: 310
   D3: 453
   D5: 25
   D7: 5000
   D9: 6
```

The last two lines will not appear on the HP 95LX. Press [<DownArrow>] to scroll the screen to see the "bottom line."

```
D11: $8,258.18
D13: $3,258.18
```

In other words, if you invested the money you saved with term insurance at a 6% annual rate, you would earn $5,000 more over 25 years.

Backsolving Using HP CALC with Lotus 1-2-3

Now, suppose you wanted to run the program in reverse to find what annual premium for term insurance would give a saving/loss figure of $0.00 exactly. 1-2-3 can't solve such a "backsolving" and uses the HP CALC program.

Keep 1-2-3 running and press [HP CALC]. Then press [MENU] **S**olve to activate the SOLVER. Press [F2] to

Find it on The HP Palmtop Paper ON DISK, Nov/Dec 92.

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ABOUT THE AUTHOR

[Ed Keefe is an author, programmer, computer science instructor, and long-time contributor to support publications for HP computers. He is the president of the FastAid Company, 314 S.W. Logan, Ankeny, IA 50021. Ed's CompuServe ID# is [75300,3667].]

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start editing and type in the following formula. (You can press <Tab> for new line within HP Solve editor.)

```
CALCCELL(
[TermPrem,d2],
[LifePrem,d3],
[LCVPeriod,d5],
[LCValue,d7],
[AnIntRate,d9],
d13)=
SavLoss
```

Press F9 (Calc) when you've entered the above and key in the same set of numbers as you did before.

```
TermPrem    = 310
LifePrem    = 453
LCVPeriod   = 25
LCValue     = 5000
AnIntRate   = 6
```

Press F7 SavLoss should = 3,258.18 (assuming that you've used the command: MENU Options Format Fix 2 to set decimal places to two).

Now to find what annual term insurance premium would give a saving/loss figure of $0.00. With the highlight bar on SavLoss, type in 0 and press F7. Then press F2 to determine the Term Premium. The answer is: TermPrem = 366.42.

Switch back to 1-2-3 and notice that $366.42 is now in cell D2. You have "backsolved" for that value.
You can delete everything in the D column except the formulas in D11 and D13 and the CALCCELL C formula will still work. Just go to CALC and press F7 and all the numbers in the CALCCELL formula will be re-established in the worksheet. (For more about this trick, see the *HP 95LX User's Guide*, pages 29-24 to 29-27.)

This technique will work with any spreadsheet that requires a number of input cells and produces a "bottom line" result. One stipulation mentioned in the *HP 95LX Users Guide*, is that the spreadsheet must be active, and must have "READY" showing in the upper right corner. Also, the spreadsheet's input cells must not be protected.

How CALCCELL Works

CALCCELL() provides one of the missing parts of Lotus 1-2-3 found in other spreadsheets, the ability to do "goal-seeking". It does this in a way that is far better than any other goal-seeking routine that I've seen. Not only can you solve for one variable in terms of another, you can solve for ANY variable in terms of all the others at the push of a function key.

CALCCELL is made up of a series of input "arguments". Each argument is enclosed in square brackets. Inside each pair of brackets are two parts; the menu prompt for SOLVE and the cell reference for 1-2-3. Each of these two parts is separated by a comma.

If there is more than one input argument, the pairs of square brackets are separated by commas as well.

The final argument, inside CALCCELL's parentheses, is the 1-2-3 output cell. It is the value in this cell that is made equal to the label on the right side of the equal sign in SOLVE.

Backsolving is one of those rare instances in which the whole is greater than the sum of its parts. All that is left to do is to add CALCCELL's power to your old spreadsheets.

Until next time, Happy Palming!

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Inside SWITCH! 2.0

Ed tells program developers how to make their HP 95LX applications System-Manager compliant under SWITCH! (SWITCHable).

[For more on SWITCH!, see page 25, this issue – Rich.]

By Ed Keefe

Ever since the HP 95LX came on the market users have been fascinated with System Manager's ability to switch back and forth between its built-in applications. However, writing System Manager Compliant applications (ones that have the same look and feel as the built-in applications) is not an easy task.

The first step towards making this easier was a "loader" program developed in UTIL Forth (see review, page 31, Jan/Feb 92 issue). This program gives almost any MS-DOS application the ability to pop-up over all the built in applications, except for 1-2-3. Unfortunately, none of the built-in programs can pop-up over DOS applications loaded in this fashion.

Next came Swift!Basic (see reivew, page 32, Jul/Aug 92 issue), which gave us with the ability to create true System-Manager compliant programs in BASIC. Mark Scardina used Swift!Basic to create SWITCH!.EXM, a menuing system that can run up to 48 different DOS and System-Manager compliant programs at the push of a couple of keys. Mark's latest version of SWITCH! (2.0) makes creating System-Manager compliant programs easier for the rest of us.

A New SWITCH!

The new SWITCH! 2.0 Developer's Kit lets you turn any Pascal, C, C++, Modula II/III, etc. program into a "task-switchable" application. Not only will your program be able to pop up over any of the built-in applications (including 1-2-3), any of the built-in applications will be able to pop up over your application.

The amount of recoding you'll have to do with your program is minimal. Adding a few calls to DOS Interrupt **63hex** is all it takes. All the function calls are implemented in the *.SWI loader files created by SWITCH! Loader Generator (found in the Developer's Kit). Note that the loader is a .SWI file instead of the usual ".EXM". Apparently System Manager is not as picky about executable file names as is DOS.

Technical Specifics: For Programmers Only!

DOS programs implementing these calls to Interrupt 63h will communicate with System Manager and allow task switching and alarm handling on the HP 95LX. Since Interrupt 63h is always present on the HP 95LX, these calls can be structured to allow for continued DOS compatibility of the calling program.

Programs calling these functions should follow these guidelines for maximum usability:

1. Programs should check if they are on an HP by using Function 4DD4h Int 15h which returns 4850h in BX.
2. Whenever possible, programs should allocate any required memory before allowing task switching as the memory may not be available upon return. The Loader provides for minimum memory allocation.
3. Programs should release all unused memory prior to allowing task switching to allow additional applications to be launched.
4. Programs should be set up to respond to an "extended keyboard". Even though all of the extended keys are not present on the HP 95LX, it does, nonetheless use extended keycodes to access the blue function keys. If your program does not use the blue keys, nor any of CHAR function keys, you may omit this prescription.
5. Programs should never access COM2 nor use

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ABOUT THE AUTHOR

[Ed Keefe is an author, programmer, computer science instructor, and long-time contributor to support publications for HP computers. He is the president of the FastAid Company, 314 S.W. Logan, Ankeny, IA 50021. Ed's CompuServe ID# is [75300,3667].]

Relocations

One of the limitations to writing a system-compliant EXM application has been the requirement to have zero relocations in your code. This is not an inherent limitation but one caused by a bug in SYSMGR. The main problem is that most programmers are unaware of what a relocation is, much less how to get rid of them.

A relocation occurs most often when the compiler is requested to supply a segment address. The number of relocations or fix-ups is specified in the header of the EXM at offset 06h. The actual values are contained in the header starting at the offset specified by the value at offset 18h.

The insidious nature of the bug is that SYSMGR does more fix-ups than the header specifies. If a program with fix-ups is run and then a subsequent program with fewer is loaded, there are fix-ups left over in SYSMGR's relocation table that it will try to process.

SWITCH! version 2 eliminates this problem by making sure that the table is clear whenever a system compliant program is loaded.

COM1 for interrupt driven transmission without a modified low level routine.

6. Mode 7 text is the only video mode available. Graphics are implemented in a non-standard way.(How well we know!)
7. Whenever possible, programs should be implemented as an EXE-type executable file. When a COM format is required, the stack area needs to be explicitly allocated and sized on startup due to a bug in MS-DOS 3.22 that allows the stack to over-write the C: drive if programs are launched with less than 64K of memory.
8. Programs should not get keyboard input below Int 16h. i.e do not use Int 09h.

Interrupt 63h Functions

The following Interrupt 63h functions are provided in the *.SWI loaders available to launch DOS programs. These functions are set up by SWITCH!.COM, which is a System Manager Shell program available from ACE Technologies. All registers not required for output will be returned unchanged.

Int 63h, Function ACE0h : SWITCH Unlock
This function should be called when an application can be interrupted at the next keyboard input. The default condition is locked and task switching is only allowed if an UNLOCK is received. Function ACE0h may also be used to detect the presence of SWITCH!.COM and System Manager by checking that AX is returned unchanged. If SWITCH! is not present AX will be different.

Child processes will not be SWITCHable unless they explicitly called the UNLOCK function.

Int 63h, Function ACE1h : SWITCH Lock
This function prevents the program from being task switched by System Manager. An UNLOCK should always follow as soon as the program is again interruptable. It is not necessary to call this function if an UNLOCK has not been called. Programs are defaulted to the LOCK condition.

Int 63h, Function ACE2h : Lock COM1
This function prevents System Manager from opening the COM port and thereby maintaining control. An unlock should always follow as soon as the COM port is again available. This will not prevent programs that go directly to the port from disrupting the link.

Int 63h, Function ACE3h : Unlock COM1
This function reverses the lock function to allow for access to COM1. This function should be called as soon as the program makes COM1 available.

Int 63h, Function ACE4h : Stuff Scancode
This function stuffs the keyboard buffer with the passed keystroke upon returning to System Manager. This will allow for the return to a specific application.

Loading Programs

SWITCHable applications are launched from System Manager by a *.SWI Loader. This loader communicates with SWITCH!, and accomplishes the following before launching the application.

First the loader shrinks 1-2-3 if open and allocates required memory (a minimum of 64K for *.COM files).

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Upon return, the process is reversed, but now the memory is returned to the application and any free System Manager memory is allocated to the loader.

The System Manager alarm function is supported. To make the alarm independent of a keypress, a keyboard loop using INT 16h Func 1h or 11h is required. Upon activation, the screen will be saved and cleared, the message displayed, and the screen redrawn.

Conclusions

Only one SWITCHable application can be in memory at any one time. Prior ones will be swapped to disk with the reserved space specified when launching SWITCH!.COM.

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The loader may, then, display an error message if the necessary memory is not available. If all goes well, the loader swings into operation. It moves System Manager application data segments and itself to the top of memory. Then it chains to INT 16h to provide a link to System Manager. Next, it chains to INT 21h to protect against re-entering DOS. The loader sets the required, display characteristics, the required startup drive and directory, and, finally, executes the application.

Once an application is running, it is not able to be task switched until the UNLOCK call is made. Upon receiving a valid hotkey the following events occur: First, any unused memory is temporarily reallocated to the loader. INT 23h and 24h are saved for restoring upon return. The screen and its mode are saved. The cursor position and size are saved and control is given to System Manager.

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Many Ways to Back Up Your Files -- and Many Ways to Lose Them!

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By Hal Goldstein

By now you have experienced how the HP 95LX Palmtop makes your life easier and more productive. Wherever you go you have a searchable phone book, an appointment book with to-do list, key notes from meetings, important spreadsheets and equations. Miraculously, all that information is stored in your pocket or purse and accessed with a few key strokes.

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I would wager that each of the thousands of people reading these words have lost information on their palmtop or desktop computer – maybe a few words, maybe entire databases of information. Ask any computer expert and he'll tell you that the experience of losing data does not go away as you learn more about computers.

The real expert has developed a systematic procedure whereby he backs up his data frequently. The worst case is that he loses an hour or two of work. If you don't back up the information you generate on your 95LX, it's only a matter of time before you lose something through your error, or the computer's error.

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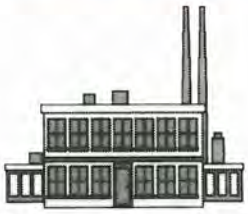

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Dec 17 - Miami, FL	Jan 8 - Dallas, TX
Dec 21 - Boston, MA	Jan 11 - Denver, CO
Dec 22 - New York, NY	Jan 14 - San Francisco
Dec 28 - Philadelphia, PA	Jan 18 - Seattle, WA
Jan 4 - Chicago, IL	Jan 27 - London, UK

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How Can I Lose My Work, Let Me Count the Ways ...

The purpose of this section IS to scare you! If you do not understand some of the concepts, reread previous Getting Started columns, check your manual, ask a friend, or purchase a basic book on computers.

Here are some of the ways you can lose information on your HP 95LX through your own folly.

1. You do not save or update your MEMO, APPT, PHONE, 1-2-3, or HP CALC file when you exit the application normally, or when your system locks up and you must reboot (by pressing CTRL-ALT-DEL).
2. You lose all battery power (for example, by leaving your HP 95LX idle for a long time or by ignoring the bad or missing back-up battery message).
3. You save a file using the name of a file that already exists. The initial file is overwritten and lost.
4. When trying to save new work, you run out of disk space and have nothing you can delete from FILER.
5. You delete a file by mistake.
6. You drop your HP 95LX.
7. You lose your HP 95LX.
8. You forget what you named a file and in what directory you put it.
9. You let your RAM card battery run out.
10. You inadvertently remove your RAM card battery.
11. You lose or remove the "device driver" files that allow you to access your ACE Double Card, Stacked RAM card, or SUNDISK Flash Card.
12. You let someone mess around with your HP 95LX.

Here are some more ways that the Palmtop itself, or software running on it, can cause you to lose information. (However, you may have some part to play in it. The HP 95LX is a robust, well-tested machine of superior quality. Avoid the self-defeating habit of "blaming the machine" and not analyzing your role in a mishap.)

13. Bugs in the built-in programs or built-in DOS.
14. Bugs in the HP 95LX firmware or hardware.
15. Running DOS programs or TSR's not designed with the HP 95LX in mind.
16. Exiting programs incorrectly.
17. Exposing your HP 95LX or RAM card to a very strong electromagnetic field.
18. Exposing your data to a virus.

Backup Solutions

Even though Palmtops are handy at storing and manipulating data, given the many ways you can lose valuable information, why would any sane person want to depend on one? THE ANSWER: It only makes sense if you regularly (hourly, daily, or weekly)

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System requirements for PC Version
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back up all important information.

What follows are general backup strategies. For more details, check past or future issues of *The HP Palmtop Paper* or manuals. Because backup is so crucial, you will find reference if not full-fledged articles on backup in almost every *The HP Palmtop Paper* issue.

RAM Card Backup Strategies

The optional RAM card provides an easy means to backup your most critical C drive work. However, remember that the RAM card itself needs to be backed up.

1. Use FILER to copy crucial files such as main PHONE and APPT books, key spreadsheets to the A: RAM drive. (Remember the built-in applications normally store files in the C:_DAT directory or in the case of 1-2-3 the C:\ directory.)
2. Purchase a RAM Card drive (see DataBook or Adtron ads this issue, check Third Party Products sections in back issues). These drives normally connect to an IBM compatible PC and look like a normal disk drive to a PC. To back up files first make sure all important files are copied the RAM card from the HP 95LX. Put the RAM card in the RAM card drive and copy the RAM card files to the PC's hard disk or floppy disk using simple DOS Copy commands from the PC.

PC Backup Strategies

3. Purchase The HP Connectivity Pack (part # HP F1001A). Use the Pack's cabling. Then follow instructions to backup files from the HP 95LX and PC using the FILER program on both the PC and the 95LX.
4. Run The HP Connectivity Pack DOS Connect program on both the 95LX (DCS95) and the PC (DC95) to make the 95LX disks directly accessible from the PC. Use the DOS COPY or XCOPY commands to backup up HP 95LX files to the PC.
5. MAC users can purchase the DataViz or Sparcom, Mac to HP 95LX connectivity programs (see ad this issue).
6. Windows users can use Intellelink or Sparcom Connectivity programs.
7. Purchase the HP 82222A Serial Interface Cable for a PC or HP 82223A Cable for the MAC. Use communications software on the desktop and built-in COMM on the HP 95LX. Use XMODEM or KERMIT protocol.
8. With the HP2222A Serial Interface Cable on both the PC and HP 95LX run ZIP.COM, a ommunications program supplied on *The HP Palmtop Paper*'s free 1992 Subscribers Disk.

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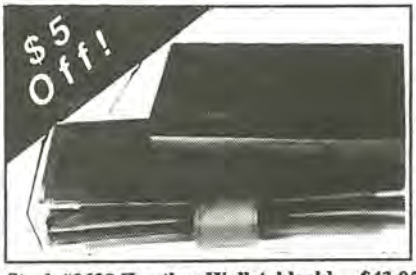

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If you only have an HP 95LX

Because of the dangers cited previously, even if you do not own another computer or a RAM card you should develop backup strategies that employ a combination of the items listed below.

9. Create duplicate copies of your most important files such as your PHONE and APPT books. Copy the files to a different directory (for example, use FILER to copy your main PHONE .PBK file from the C:_DAT directory to the C:\ directory).
10. Purchase an HP 82222A Serial Interface Cable and a high density floppy disk. Make arrangements with a friend with a PC to borrow it for 10 minutes per week. Use one of the methods described above to back up files to the floppy.
11. Purchase the HP 82224A Serial Cable Adapter Kit, along with the HP 82222A Serial Interface Cable. Borrow a printer from a friend to create a "hard copy" of each of your most important files. You can print from your friend's PC. If the printer has a serial port, you can print directly from the 95LX to the printer using the cabling described above.

    Similarly, borrow a friend's modem connected using the above cabling. Use built-in COMM to send key files via a phone line to a PC with a modem and communications software running.
12. Purchase an external 3 ½" floppy drive designed to work with the HP 95LX such as the Sparcom Drive95. Backup 95LX files to a disk in Drive95 using FILER.

Conclusion

Make one of these strategies work for you. If you are a complete novice (we all were at one time), make backup a priority. Grab a computer-literate friend, study back issues of *The HP Palmtop Paper*, read the manual ... do whatever it takes to develop a practical, consistent backup strategy.

And to those of you with computer experience, don't let a few months without data loss problems lull you into complacency. Backup your data now and develop a procedure for regular backups.

Order Information

RAM Cards — List: Varies
CONTACTS: *Various, check advertising in this and previous issues, Third Party Products section in this and previous issues, and SUNDISK announcement in this issue.*

RAM Card Drives — List: Varies
CONTACTS: *Various, check Adtron and DataBook advertising in this and previous issues, Third Party Products section in this and previous issues.*

HP Connectivity Pack (HP F1001A) — List: $99.95

HP Serial Interface Cable (HP 82222A) — List: $35

HP Serial Cable Adapter Kit (HP 82224A) — List: $15

HP Serial to Mac Interface Cable (HP 82223A) — List: 35

CONTACTS: *HP Dealers, EduCALC 800-535-9650, or other third party vendors advertised in The HP Palmtop Paper. (Ask for part # HP F1001A.)*

DataExchange Macintosh Connectivity kit — $89.95
CONTACT: *Sparcom Corporation, 897 NW Grant Ave., Corvallis, OR 97330, USA; Phone 800-827-8416 or 503-757-8416; Fax: 503-753-7821; CompuServe ID: [75320, 2440].*

MacLink Plus Macintosh Connectivity Kit — $99
CONTACT: *DataViz Inc., 55 Corporate Dr., Trumbull, CT 06611, USA; Phone 800-733-0030 or 203-268-0300; Fax: 203-268-4345.*

ZIP File Transfer Software
CONTACT: *ZIP.COM is found on The 1992 HP Palmtop Paper Subscribers Disk.*

Back Issues of The HP Palmtop Paper

While supplies last, you may purchase sets of back issues of *The HP Palmtop Paper* or *The HP Palmtop Paper ON DISK*. Use the enclosed order card or contact *Thaddeus Computing Inc.*

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Answers to the Most Common Questions Received by HP Technical Support Staff, 1992 -- Part 1, Basic Questions

In the Fall of 1991, the HP technical support staff provided The HP Palmtop Paper readers with a series of answers based on the questions HP Palmtop users most frequently asked them. One year later HP tech support tells us that other questions are now being asked and some of last year's questions have more up-to-date answers. Once again we thank the Hewlett-Packard Technical Support staff for providing us with the following information.

By HP Technical Support

When do I need a RAM card?

If you have allocated as much of the internal RAM to RAM disk as possible, and you still need more space to store files, you may need a RAM card. Moving files from the internal RAM disk to the RAM card gives you space to re-allocate internal RAM disk to System RAM.

A RAM card is also useful for backing up the files on the internal RAM disk.

How big of a RAM card can I use in the HP 95LX?

HP sells 128K, 512K, and 1 MB RAM cards for the HP 95LX. The HP 95LX can use RAM cards as large as 2 megabytes if they follow the PCMCIA 1.0 and JEIDA 4.0 memory card standards.

SUNDISK's new Mass Storage Cards are specially engineered Flash ROM cards that come as large as 10 megabytes (see page 10 this issue).

How do I change directories in FILER?

Move the scroll bar to a listed directory and press [ENTER]. This will move you into that directory. To get out of the directory you have entered, move the scroll bar to the top line and highlight VIEW UP. Pressing [ENTER] or [ESC] will take you up one level in the directory tree structure.

To change from the C: drive (internal RAM disk) to the A: drive (RAM card) press [F5] (Goto). Then type **A:** and press [ENTER]. This will give you a list of the files on the A: drive. Return to the C: drive by pressing [F5], typing **C:** and pressing [ENTER].

A useful feature in the Filer application is the split screen. By pressing [F7] the screen is split. You can view two different directories at the same time. The split screen makes copying files between directories easy. The directories showing on the split screen are default paths for [F2] (Copy) and [F10] (Move) commands.

I get "PACKED FILES CORRUPT" when I try to install the HP Connectivity Pack software on my PC?

At the DOS prompt A:> (or whichever drive has the Connectivity Pack disk), type **LOADFIX INSTALL**. You may see your DOS 5.0 documentation for information on the LOADFIX command.

How can I make my batteries last longer?

First, use the AC adapter whenever possible. Applications that continuously update the screen (i.e. Tigerfox), or use the serial port (i.e. Filer or Datacomm), use more power than programs that spend most of the time waiting for keystrokes. Use of the AC adapter is especially important with these high power usage programs.

Second, always close the Filer and Datacomm applications when they are not in use. These two applications power on the serial port.

Third, when you are finished using the HP 95LX, turn it off. The three to five minute wait before the HP 95LX automatically turns off can add up.

Fourth, if you are running in DOS mode, the serial port is powered on. You can execute the SERCTL /O command in DOS to force the serial port off. See pages B-24 and B-17 for details on these options.

How long should a set of batteries last?

You should get between 20 and 30 hours of use out of a set of AA alkaline batteries. If you just let the system sit idle, the fully charged batteries will run down in about three months. (If you anticipate not using the system for some time, back up your files and remove the batteries.)

You should get about a year out of a lithium backup battery when used only during battery changes. The backup battery will last about eight hours if the Main AA batteries are completely dead or removed.

RAM card batteries should last about one year.

If you insert new batteries and you still have a "low battery" warning, turn the HP 95LX on and off a few times. If it stays on you may have a malfunctioning battery level sensor. Send the unit back to HP for service.

What is the proper procedure for changing the MAIN and BACKUP batteries?

Before you take out the main batteries, "AA", make sure that the HP 95LX is TURNED OFF.

Do NOT remove the main batteries at the same time as the backup battery. The backup battery provides the power to maintain RAM disk memory. If you take both main and backup batteries out, all of your internal RAM memory will be erased. As added insurance, you can leave the HP 95LX plugged in to the AC power supply while changing batteries.

What is the proper procedure for changing the RAM card battery?

When the RAM card runs down, the system will display a message, "RAM CARD BATTERY LOW". When you see this message, you should change the RAM card battery as soon as possible. To avoid the danger of not having a battery when you need it, set an alarm to sound 12 months from the last battery change.

The RAM card memory depends on a constant supply of power. When it is not in the HP 95LX RAM card slot or the HP 95LX is turned OFF, then the RAM card is using its own battery. Only when the HP 95LX is ON, can the RAM card draw power from the AA batteries in the HP 95LX. So, to change the battery in the RAM card with out losing memory, it must be in the RAM card slot and the HP 95LX must be ON. Make sure that the HP 95LX does not time out and turn off while you are changing the battery by pressing an occasional key or by plugging in the AC power supply. The battery is accessible while the RAM card is in the card slot. There is a battery door that can be pulled open using your thumb nail. If the door doesn't open easily, you may need to switch the door lock to the open position. See the diagrams in the User's Guide on pages 1-9 and 1-10.

Why did I loose my data when I changed batteries?

There are a couple of possibilities. If the system reboots, any data in the open applications will be lost. That means if you have not saved your data on disk, then it will be lost if the system reboots.

If you take the batteries out while the HP 95LX is ON, applications that were running will terminate without a chance to save data. In some cases this will cause damage to data files on the internal RAM disk resulting in a RAM disk initialization. Make sure you turn the HP 95LX OFF before you take out the main AA batteries.

On rare occasions, the HP 95LX will shut down for lack of power and an open file may become corrupted. This condition may require a RAM disk initialization to recover. When the system says "Main Batteries Low", turn the system off and change the batteries as soon as you can.

If the Main "AA" batteries and the lithium backup battery have both run down, then all memory will be lost, including the RAM disk.

As with any computer, it is very important to backup your data at regular intervals. To determine the interval, try to determine how much data you can lose before it becomes significant.

How do I save a file?

For example, to save a phone book file press [MENU] **F**ile **S**ave. If the file does not have a name, type one and press [ENTER]. If the filename is displayed, press [ENTER]. The HP 95LX will prompt you with "Replace current file? (Y/N)". Normally you enter "**Y**" for yes. Next, quit the application by pressing [MENU] **Q**uit.

How do I delete a file?

Files can be deleted in the Filer application by highlighting the file you want to delete and pressing [F3] (Delete). To delete the file respond **Y**es.

[Next Issue we'll publish some more advanced commonly asked questions — Hal.]

How Do I Get Help In Using My HP 95LX?

Several avenues of support are available:

- ***The HP Palmtop Paper*** — *is available from Thaddeus Computing Inc, 57 E. Broadway or P.O. Box 869, Fairfield, IA 52556; Phone: (800) 373-6114 or (515) 472-6330; Fax: (515) 472-1879.*

- **Ask Thaddeus!** — *Technical Support service from the publisher of The HP Palmtop Paper. Phone: 800-767-4795 or 515-472-7584; Fax: 515-472-9595.*

- **CompuServe** — *there is an active user community which is supported by HP on the CompuServe Information Service. Type GO HPHAND. CompuServe Information Services can be reached at* **800-848-8990** *or if calling from outside the USA,* **614-457-8650**.

Hewlett-Packard Support

- **General Information** — *including pre-sales information, dealer locations, support information, accessories information, and prerecorded answers to common questions are available 24 hours a day, seven days a week at* **800-443-1254**.

Technical support is available from 5am to 5pm, PST, Monday through Friday, with the following options:

- **90 days of free support** — *is available for new purchases of the HP 95LX. This service begins on the date of your first call. The number is* **(503) 757-2004**.
- **Six month support contract** — *is available for $149.00. This provides access to the support group via an 800 number. The number is* **(800) 443-1254**.
- **A 900 toll number** — *is available at $2.00 per minute, the first minute is free. The number is* **(900) 288-0025**.
- **For repair of your HP 95LX** — *contact the Corvallis Service Center. The number is* **(503) 757-2002**.
- **For customers outside the USA** — *the service and support phone numbers are printed in the back of the User's Guide. You can also call your local HP sales office to get the phone numbers for the service and support groups in your area.*
- **Written correspondence** — *can be addressed to: Hewlett-Packard Co. Customer Support 1000 N.E. Circle Blvd. Corvallis, OR 97330. This service is free.*

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Or

2. FAX

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Patience Saves $$$ Fax us your problems or questions in as much detail as possible, or leave that information on our answering machines, and we'll do the research off-line, reducing billable on-line time! Provide callback times and numbers and we'll respond ASAP.

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PLEASE NOTE: The ASK THADDEUS! HP Palmtop Helpline is designed to help you get the most out of your HP Palmtop PC. The information we provide is advisory only and is correct to the best of our knowledge. Thaddeus Computing, Inc. is not responsible for any loss of data, time, or money, or for any expense whatsoever resulting from the use or implementation of our services. Any outcomes from use or non-use of our suggestions are the sole responsibility of the recipient.

••• BASIC TIPS •••

This section focuses on the 95LX's built-in applications, giving tips of a more basic level. We are interested in your feedback on this section. Is it differentiated enough from Quick Tips? Do you have any tips? Please write: *The Editor, The HP Palmtop Paper, Thaddeus Computing, 57 E. Broadway, Fairfield, IA 52556.*

HP Calc

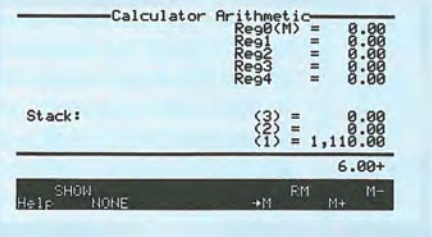
HP CALC IS EASY TO USE!

Although HP CALC's display seems complicated at first glance, using HP CALC as a regular calculator is quite easy. Start the application and you see a blank screen with the Words "Calculator Arithmetic" at the top. Type in any number (i.e. "555") and the number appears down in the bottom right-hand corner of the screen, below a long horizontal line. This is where the numbers you enter and answers you receive will appear. Now press the keypads plus sign (**+**), type in **555** again, and press the equal sigh (**=**). The answer, **1110**, appears at the bottom right. It's that simple.

The 95LX keypad is almost identical to a standard calculator's keypad. The division (/), multiplication (*), subtraction (-), addition (+), and equals (=) keys are on the right of the keypad, just like a regular calculator. You use them just like you would on a regular calculator. The memory (M), memory recall (RM), memory plus (M+), and memory minus (M-) keys are F7, F8, F9, and F10 respectively. The DEL works like the clear key on your calculator.

But HP CALC is more than a regular calculator. The "(" and ")" on your keypad allows you to use brackets in an algebra-like manner. The exponent (^) and percentage (%) work as expected in Calculator Arithmetic, and the Z, X, C, V, B, N, M, and L keys activate other calculator functions.

But what about the rest of the HP CALC display. Why all that space? Press F2 (SHOW) and you'll see the following screen.



HP CALC screen showing registers

Reg0(M) through Reg4 at the top are "memory registers", locations where you can store numbers and results of calculations. The bottom "Stacks" show the results of your last three calculations. (Stack (1) in the above screen shows that the results of the last calculation was 1,110.00. The "6.00+" at the bottom indicates that you are in the middle of a new addition.)

If you press F2 again you will see that you actually have 10 memory registers (Reg0(M) through Reg9). To store the displayed number in a specific register, press N (STO) followed by the register number. To recall a value from a register, press M (RCL), followed by the register number.

This should get you up and going on HP CALC. For more on HP CALC, see the *HP 95LX Users Guide*, beginning on page 22-2.

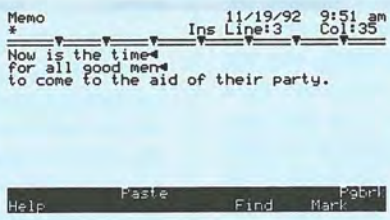
Memo

HARD RETURN VS. WORD WRAP

Open up MEMO, type "Now is the time" and press ENTER. The little "carrot" at the end of the line a "hard return", sometimes called a "carriage return".

It is a permanent termination to a line of text. If the line has 15 characters in it and you press ENTER, that line will always print or display as 15 characters on a printer or another computer.

In most word processors, the hard return at the end of a line is not visible. In MEMO, when you press ENTER, the hard return is displayed as the "carrot" symbol. The symbol does not appear when the document is printed out.



MEMO screen with hard return symbols

"Word wrap" is a feature that automatically ends a line when it approaches a pre-set number of characters. MEMO's word wrap is usually set to 40 columns (press MENU **S**ettings **W**rap). MEMO will move the word you are typing to the next line, if it will not fit on the current line. One advantage of word wrap is that you don't have to press ENTER to end a line. If you export a MEMO file into another word processor with a different column setting, or send it to a printer after resetting MEMO wrap to 80 columns, a word wrapped document will automatically adjust to the new column settings and display or print properly.

Phone

ESC UNDOES CARD INSERT/MODIFICATION

Press ESC while inserting a new PhoneBook card and any information you have entered will be erased. Press ESC while modifying an existing card, and any changes you have made will be eliminated. While this can be a frustrating feature if you hit ESC accidentally, it can also be very useful.

Suppose you accidentally typed over, or modified one of your most important PhoneBook entries. Press ESC before pressing F10 (Done) and the original, unmodified card comes back. If you are adding a new card and change your mind, press ESC and it just won't be added. The point is that pressing ESC undoes whatever you've done to the card, as long as you haven't pressed F10. ESC is really the PhoneBook's "undo" key.

Appt

"APPOINTMENTS ONLY" SIMPLIFIES DISPLAY

When first using APPT I set the appointments to "15-Min" in Settings (press MENU **S**ettings **T**imeline). I had a few appointments spread throughout a 9-5 day, and scrolling through them was time consuming and frustrating. Thanks to Mark Snyder of Somerville, NJ for the following tip.

Press MENU **S**ettings **T**imeline **A**ppts-Only. This sets APPT up to only display those time slots where you have an appointment scheduled. Instead of a long list of 15 minute time intervals, you can see up to 9 appointments at a glance and scroll down if there are more. You can quickly look at all your appointments. Its easier to see at a glance if there are any time conflicts.

Robert Roney
ASK THADDEUS!

Lotus

MODIFY BUILT-IN LOTUS WORKSHEETS

The Lotus worksheets that come with the U.S. English version of the HP 95LX are built into ROM and cannot be erased. However, you can copy any of them to another file name or location and modify them in ways that will make them more useful to you. For instance, you can change the text to Spanish, French or whatever your native language is. But take heed of the note in the *95LX User's Manual*, page 16-1: "These templates contain formulas and range names that if altered, will cause the template to give incorrect results." The built in files are _CARLOAN.WK1, _CFLOW.WK1, _EXPENSE.WK1, _HOMEBUY.WK1, and _STAT.WK1. (Non-English units may not contain all these files).

▲▲▲ QUICK TIPS ▲▲▲

Lotus

BUILT-IN WORKSHEET & 95LX CLOSES A DEAL

I used the 95LX to help me buy my wife a new car. Before I went to the dealership, I logged on to CompuServe and downloaded Consumer Reports (GO CONSUME) reviews of cars I was interested in, and stored them in the 95LX.

At the dealership, I used the built-in _CARLOAN.WK1 worksheet (on English 95LX only) to figure out our monthly payments using different interest rates and down payments. It was very accurate. It came out to the penny to the quote the dealers computer came up with. He was very surprised that my "calculator" could be so accurate, and I explained it was a computer, not just a calculator.

In the heat of negotiations, when I mentioned that I was going to buy a competitive car unless he brought his price down, the salesperson started to say bad things about the competitive vehicle. So I brought out the 95LX and showed him the Consumer Reports article praising the competitive vehicle.

I can report that I ended up getting a great price on the car, thanks in part to the power of portable information and the 95LX.

Larry Lefkowitz
CompuServe ID: [76711,731]

Adapter

POWER 95LX AND MODEM WITH ONE ADAPTER

Check out a Power Adapter Y-Cord (Radio Shack # 273-1649). It's a Y cable with on molded female socket that accepts the power adapter's output jack and two male plugs on the other end to connect to the 95LX and a modem (providing it has the appropriate adapter port). I've been using one on the road for some time now to allow me to use my modem's AC adapter to power both my SupraModem and 95LX.

Frank Lam
CompuServe ID: [76711,731]

Battery

KEEPING BATTERY COSTS DOWN

If you use rechargeable Nickel Metal Hydrides the cost of 500 recharges comes to pennies per use! Heavy users (8-10 hours a day without adapter) will need to charge every couple of days. Users with adapters in strategic locations (on desk top, next to easy chair,on night stand, next to throne!) will get months of use from one charge.

Smart users of NHD rechargeables will change at regular intervals to avoid the dangerous drop off of power inherent in rechargeables. (See page 13, Jul/Aug 92 issue for complete description of various battery options).

Frank Mc Laughlin
CompuServe ID: [72110,535]

LITHEONS REST IN PEACE

The other good thing about Eveready Lithiums AA Energizers, besides having twice the life of Alkalines, is the extremely long and stable shelf life. They would make a great carry along in an emergency when using rechargeables or going on a long trip. I keep sets in the desk drawer, in the attach case, in the backpack, in the glove compartment, and in the handlebar bag.

Fred Kaufman
CompuServe ID: [72560,36]

A SECOND JOB FOR ALKALINE

I swap out my alkalines the first time the "low main battery" warning flashes. Saves on my back-up battery, which gets fried in fairly short order if it has to support the 95LX while the main batteries are dead.

I throw the 95LX rejects into my Sony "Sports" FM-stereo headset, and the batteries hold down their second job very well. (Batteries no longer strong enough to power the HP 95LX will power other devices for some time more). Put your old batteries to work somewhere less critical!

Thomas Glen Leo
CompuServe ID: [76360,2533]

Carrying Cases

RADIO SHACK CARRYING CASE

On my last visit to Radio Shack I found a rather nice pouch for the 95LX. The Cordless Telephone Carry Case Cat. No. 43-190 is only $5.49, made with simulated black leather, and has a belt/hand strap, fold-over flap secured with velcro, fits snugly and has room at the bottom for a serial cable and 2 AA batteries.

Dave Goodman
CompuServe ID: [72330,130]

Connectivity

USING COMPUSERVE AND OTHER SERVICES ON THE ROAD

To do this, you'll need a few more items in your road warrior kit:

1. A list of European access nodes for CompuServe. Type GO PHONES look for the local CIS phone numbers for the countries you will visit.
2. Phone system adapters. At the very least, take along some alligator clips and short lengths of wire.
3. Take an MNP modem; line noise can be a major problem.
4. Get power supplies for the 95LX and the modem suitable for the countries you will visit.
5. Develop a way to get data off the 95LX and onto diskettes.

Ted Dickens (HP Forum Sysop)
CompuServe ID: [76701,272]

CONNECTING THE 95LX TO AN OS/2 SYSTEM

I was able to get DOS Connect to work with an OS/2 system by switching the OS/2 system to a slower speed. I type in this to get a connection: **dc95 -p:c1 -b:19200 -d:e**. (This assumes that your serial port for the connection is COM1 and that the 95LX's A: and C: drives will map to the PC as E: and F: (I have drive D: on my PC.) The -d: portion is optional.)

I tried higher speeds, but 115200 just doesn't connect, 57600 and 38400 connect, but give me errors. 19200 is reliable, and it works, but slow.

Bob Berardino
CompuServe ID: [71620,520]

DOS

LITE SLEEP

To conserve battery power, the 95LX enters a light sleep mode when it is waiting for keyboard input. DOS programs which poll the keyboard (regularly check if a key has been pressed) but continue to process will still cause the 95LX to go into light sleep mode. Such programs are slow on the 95LX.

For example, suppose you have a program that prepares a report from a database. It has to read information from all records in the database, but the programmers also wanted you to be able to interrupt the program in the middle of a report.

So the program reads a few records, then checks the keyboard, reads a few more records, checks the keyboard, etc. If you run this program on the 95LX, it will take forever to finish. The 95LX will see the constant keyboard polling and assume that the program is idling, just waiting for keyboard input.

To successfully run the program, you'll need to disable light sleep mode, or keep your finger on a key that won't disrupt the program but will overcome the light sleep mode. To disable light sleep mode, you can use HP95CTRL.COM available on the CompuServe HPHAND forum and on the free 1992 HP Palmtop Paper Subscribers Disk.

Ted Dickens (HP Forum Sysop)
CompuServe ID: [76701,272]

Filer

SHUTTING DOWN FILER DOESN'T SAVE RAM MEMORY!

Leave FILER open. HP and LOTUS decided that the functions in FILER would need to always be available. For example, if an application runs

out of disk space, you can always flip into FILER, delete some files or move them to another drive, and then flip back into the first program and let the operation continue.

No matter what you have open, System Manager always reserves the memory required for FILER to open. So even if you shut down FILER, you don't gain any extra system RAM.

Ronald Vieceli
CompuServe ID: [73310,3663]
Ted Dickens (HP Forum Sysop)
CompuServe ID: [76701,272]

HP Calc

HOW LONG WILL A PEN LAST
USE SOLVE on the 95LX to enter the following equation:

weeks=SQRT(cost/2.618)

I derived this formula based on years of personal research on losing pens. As you can see, the formula is not linear, but appears to approach a practical limit on the amount of time that one can keep track of a pen.

I keep a box of a dozen Uni-Ball pens in a desk drawer. Each pen costs about 95 cents. Each pen lasts me a little over 4 days before it's lost and I have to take another from the box.

On the other hand, a $42 Cross pen will last at least a month.
Please note: The above formula has been uploaded as SHAREWARE. If you find it useful, please register with the author. The registration fee is one Bic pen. This will allow me to continue to develop new formulas (for about 3 days).

David Shier
CompuServe ID: [75030,3374]

& Misc

SERIOUS "HARD RESET" BUG
When all else fails in curing a 95LX problem such as system lockup or serial port not working, you can do a hard reset on the HP 95LX by pressing [CTRL]-[<Shift>]-[ON] (no reformat). However, due to a problem in the HP 95LX, this may corrupt one of your built-in C drive files or subdirectories. If a file gets corrupted, you will get an "I/O error" when trying to read it.

The problem may or may not occur depending on where files happen to be located on the built-in RAM Disk. The problem will not occur on 1-Megabyte units with a RAM disk size of 512K bytes or less.

One way to test for corrupted files is to enter DOS and copy them to nowhere using the **copy *.* nul** command. (The DOS CHKDSK command will not detect the error). If no errors occur, your files are all right.

I have written a utility to be distributed by ACE technologies called UNRESET that will fix the problem.

Dave Goodman
CompuServe ID: [72330,130]

YOU USE IT TOO MUCH WHEN ...
You know you're using your 95LX too much when:

1. You mis-dial a number on your telephone and you look for the backspace key.
2. You try using ALT-Arrows on your desktop PC to bring back scrolled text.
3. You get so used to getting info from your '95 that you reach for it when someone asks you how the weather is.
4. You haven't read a book in over a month.
5. Your wife starts leaving little notes to you in MEMO.
6. You start checking your mail box more than once a day looking for the next issue of *The HP Palmtop Paper.*
7. You can't bear the thought of doing without it long enough to send it to HP, even for little repairs like a cracked screen or smoke coming out.
8. You have AC adapters plugged in next to the bed, your desk, your easy chair, and the toilet!
9. You start hiding your credit card bill (with its charges from the HP 95LX CompuServe section) from your wife.
10. You have a dream where you stand up in front of a group of people and say, "Hello. My name is Dave, and I'm a 95LX user."
11. You laugh out loud at silly messages like this one. Of course, none of this is based on personal experience. Really.
12. You miss your plane and you were sitting right next to gate.

Dave Goodman
CompuServe ID: [72330,130]
with addition by Larry Tachna
CompuServe ID: [76520,1630]

INCREASE CONTRAST
To increase contrast, press and hold **<ON>** and then press the **+** (plus) key. To decrease, do the same thing with the **-** (minus) key.

Hal Goldstein
Editor, The HP Palmtop Paper

PRESS [CTRL] FOR CUT, COPY, AND PASTE
Cut, Copy and Paste are generally, although not always, found as CTRL key combinations on most System-Manager compliant applications. Press [CTRL] and an alternate menu may appear over the Function Key template. Press [ALT] in FILER to see other FILER functions.

Fred Kaufman
CompuServe ID: [72560,36]

PACKET RADIO ON 95LX
I use the 95LX with my packet radio, with both a PK232 and a PacCom Handipacket. The PK232 also allows RTTY, AMTOR and CW. COMMO lets you do all this with a split screen, but the built in COMM program also works fine.

Phil Bullock
CompuServe ID: [70571,1741]

Phone

FIRST AND LAST ITEMS IN PHONE
Start a name with a 'space' character to force it to be the first listing in the phone book. To create a last entry in the phone book start a name by holding down ALT and typing 255. Works great for a prompt in the phone listing that never moves.

Fred Kaufman
CompuServe ID: [72560,36]

Printers

A FAX LETS YOU TRAVEL WITHOUT A PRINTER
If you don't have much printing to do, a portable fax designed to work with the HP 95LX can replace your printer. (WorldPort/U.S. Robotics and New Media produce such Fax / Modems). Files can be faxed to local fax machines for hard copy.

Rich Hall
Editor, The HP Palmtop Paper

SET Set Up

TOPCARD REWARD SCREEN
Misplacing the 95LX is an ever present worry. If it happens, you want to encourage its return. Where better to do that than on the topcard. Under SET UP, select **O**wner and enter the following information:

Name: <Your Name>
Title: RETURN FOR REWARD!
Company <Your phone number>

Gary Oliver
Milsons Point, NSW, AUSTRALIA

OPTIMUM RAM DISK/ SYSTEM RAM SIZE
Dividing up the 95LX's RAM memory between the RAM Disk and the System RAM is done from SET UP (close applications, press **S**ystem **M**emory and use Right and Left Arrow Keys). You have to consider how you use the 95LX when deciding how to divide up the RAM.

If you have a lot of data and only use the built-in applications, set the System RAM at the minimum needed to run the applications (about 250-300K). That way you have the largest possible RAM Disk to store text, data, and configuration files.

If you have some big programs and very little data to store, then set the System RAM as high as you can (394K for the 512K 95LX and 640K for the 1MB version). This allows you to run larger programs.

There may be a multitude of gradations between A and B, so you may have to experiment to find the right balance.

Frank Nagle
CompuServe ID: [71140,1253]

HOW TO CONTACT US

There are a number of ways to get in touch with *The HP Palmtop Paper* staff. You can write; mail us a disk with your comments; send CompuServe mail; fax; or call. Our address is:

Thaddeus Computing, Inc.
The HP Palmtop Paper
PO Box 869 or 57 E. Broadway
Fairfield, IA 52556, U.S.A.

Fax #:515-472-1879
Phone: 515-472-6330
or 800-373-6114

CompuServe ID:
Hal Goldstein, [75300,2443]

To advertise in *The HP Palmtop Paper*, contact Brian Teitzman or Margaret Martin.

To subscribe, change address, or clear up any problem with your subscription, contact our subscription department (Director, Kelly Johnson).

Technical Support

ASK THADDEUS, Thaddeus Computing, Inc. — Call (800-767-4795 or 515-472-7584) or fax (515-472-9595) the publishers of *The HP Palmtop Paper* your HP 95LX problem. Rates are $2.00 per minute plus an additional charge for non-U.S. callbacks to cover the cost of international long distance rates.

HP Technical Support — HP offers these options:

- 90-DAYS FREE SUPPORT— is offered to all 95LX users and is available by calling (503) 757-2004.
- FREE AUTOMATED SUPPORT— is offered 24 hours a day by calling (800) 443-1254.
- 6-MONTH SUPPORT CONTRACT— for $149 you get a toll-free number and 6 months of unlimited support. Call (800) 443-1254.
- 900-NUMBER SUPPORT— available on a pay-as-you-go basis (first minute free, $2.00 per minute thereafter). Call (900) 288-0025.
- COMPUSERVE GO HPHAND FORUM - Call 800-848-8199 or 614-457-0802: For membership state #231.

How to submit an article

The richness of *The HP Palmtop Paper* comes from the contributions of 95LX users. We and your fellow users welcome your submissions. (We do not offer payment for articles; your reward is knowing that you've helped others.)

If you have a good idea and want to "go for it," send it in via CompuServe EMail [75300,2443] or send disk or hard copy to Hal Goldstein or Rich Hall at the above address. Alternatively you can send an outline of your idea. We will try to guide you as to when and whether we would use the article and contact you if we need clarification or have any suggestions. We may want to use an article but for a variety of reasons you may not see it for many months. Please understand that we cannot promise to run any article.

If you can, especially if you write a Palmtop Profile, send us a black and white photo of yourself.

Products Advertised in *The HP Palmtop Paper*

Company	Product	Page number
ACE	(DoubleCard RAM Memory Cards)	inside front
	(Switch)	1
	(BATTman Battery Monitoring Software)	3
	(myREMOTE)	4
Active Data	(RAM Memory Cards)	outside back
Adtron	(Memory Cards and Card Drives)	40
ASP	(Calendar Supplement)	58
AutoByte	(Money Manager)	23
BSE	(Serial/Parallel Connectivity Kit)	55
CM Software	(Pocket Sales Force; Pocket Field Force)	49
Computer Instructors	(95LX, Lotus, ACT! Training Classes)	58
Contact Software	(ACT Contact Management Software)	17
CSS	(Environmental Case)	56
Databook	(Memory Card Drive)	45
DataViz	(MacLink Plus)	inside back
E-Z Arithmetic	(Math tutorial)	6
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GlobalLink	(Language Translation Software)	61
Genus Software	(Mileage Log)	45
Greenwich Instruments	(Serial-to-Parallel converter)	50
Imaging Supplies Express	(RAM Memory Cards)	18
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Software on The HP Palmtop Paper ON DISK (November/December 1992)

Product	Function	Type	Page
CMCALC.EXM	Application: New version, Computer Math Calculator	Free	18
GRAPHI.ZIP	Application: Drawing / viewing program	Shareware	38
SPEL95.ZIP	Application: Spell checker	Free	38
SOKOBAN.ZIP	Game: Maze game of logic	Free	37
WP.ZIP	Macros: WordPerfect 4.2 macros and headers	Free	45-46
CYCLING.ZIP	Worksheets: WK1 files mentioned in Cycling profile	Free	30, 32
INSURE.WK1	Worksheets: Insurance worksheet	Free	52
95BUDDY.ZIP	Utility: New version, fixes problems, lets you reset timeout	Shareware	18
LGM.ZIP	Utility: Detects sounds in your 95LX	Shareware	3
MULTIDAY.ZIP	Utility: Week-at-a-glance display for APPT	Shareware	16
WEEKABK	Utility: New version of Week-at-a-glance display for APPT	Free	18
UNZIP.EXE	Utility: decompresses .ZIP files	Free	na
HPALL.ZIP	Text: Descriptions of files in all HP forums of CompuServe	na	na
ADVERT.ZIP	Text: in-depth descriptions, products advertised this issue	na	na
PTP6.ZIP	Text: The HP Palmtop Paper, Nov/Dec, 1992	na	na
README.ZIP	Text: cover letter for HP Palmtop Paper ON DISK	na	na

Software mentioned in this issue and included in other issues of The HP Palmtop Paper On Disk or the 1992 Subscribers Disk.

ATO	(Fall 91 ON DISK) Automates CompuServe	Free	50
COMMO	(Jul/Aug 92 ON DISK) Communications program	Shareware	26
DIET	(92 Subscribers Disk) File compression	Free	3
MEDSTF.ZIP	(Jul/Aug 92 ON DISK) Medical PBK databases	Shareware	18
MESSAGE.ZIP	(Mar/Apr 92 ON DISK) Automates CompuServe on 95LX	Shareware	50
REMTEST	(Sep/Oct 92 ON DISK) Tests VCR, etc for myREMOTE	Free	28
SNDPLAY.ZIP	(Sep/Oct 92 ON DISK) Hear quotes & sounds on the 95LX	Free	32
STICK.COM	(92 Subscribers Disk) Makes CTRL & ALT sticky	Free	46
TAPCIS	(Mar/Apr 92 ON DISK) Automates CompuServe on PC	Shareware	50
VDE	(Fall 92 ON DISK) Word Processing program	Shareware	26
UNO	(May/Jun 92 ON DISK) Freeform Database	Shareware	27

MACLINK Plus HP 95LX

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